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Team Yankee 2

SIM ANT
Soldiers on the march

ACES OF THE PACIFIC
The rising sun of Dynamix

PLUS
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Mike Ditka Football
Fighter Command
GB Flight Scenery
Winter Games
Tips, tips, tips

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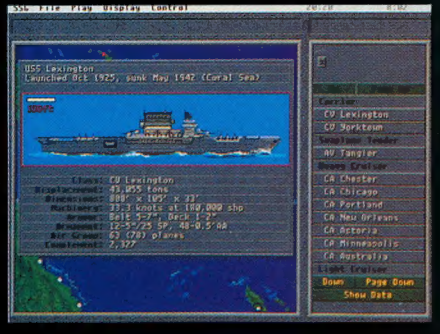

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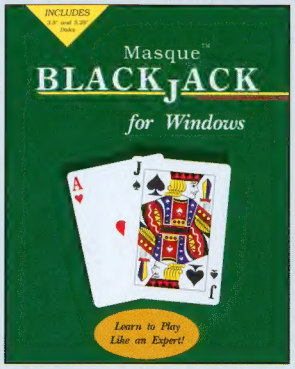

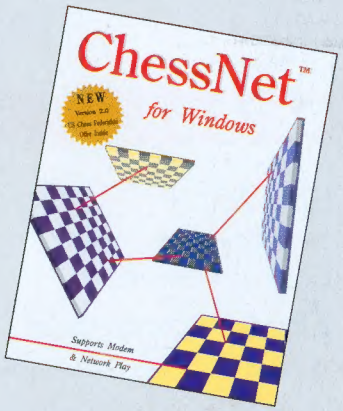

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Reader Service No. 60

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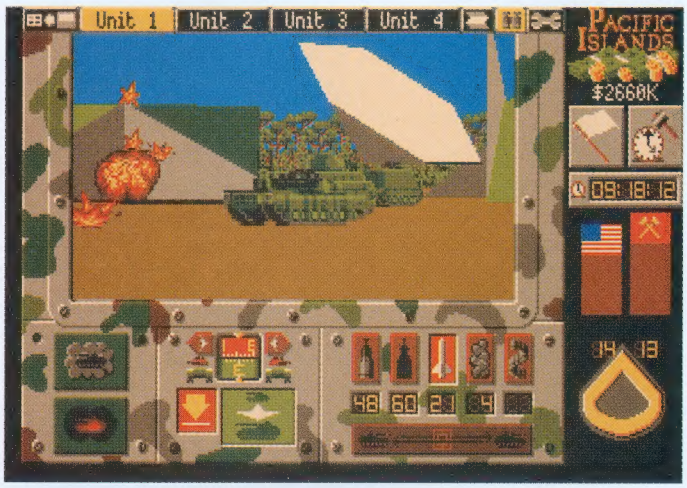

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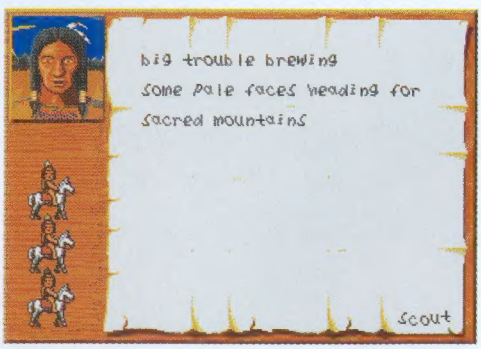

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School's out

AS FLIGHT simulation design gets more sophisticated, the issue of what is meant by 'realism' becomes increasingly important. As sports statistical simulations make great strides towards an ideal of accuracy, people start to judge new releases more for their ability to reflect real-world events than for their 'playability'. What is it we're looking for? What purposes are these things meant to serve? Is what we've always thought of as entertainment software starting to slip towards something else? There certainly seems to be some very active hope that such is the case.

The first clear indication of a new kind of user are the number of complaints concerning the 'inadequacies' of recent flight and sports simulations. It seems that this new audience is much more committed to the idea of simulation as potentially educative. Simulations no longer serve, from this perspective, the goal of whiling away a few hours inside some imaginary paradise of the mind; on the contrary, they are accessed in order to further the user's knowledge about some particular field of technical expertise, be it the flight dynamics of advanced helicopters, the problems likely to be encountered in rugged terrain when evading radar-guided SAMs, or the potential performance changes to the Chicago Bears likely to occur because Jim Harbaugh's passing to the corner has improved dramatically.

The question then arises, is the software being taken as most representative of this kind of educative 'realism' truly realistic? Ultimately, no. For all of the potential statistical accuracy that can be summoned up in the design of something like **Earl Weaver Baseball 2.0**, it still falls far short, even in the simplest sense, of being able to model complex reality truly scientifically. The best sports stats designs, like **APBA Baseball**, may fill in the stats quite accurately; but as any stats designer knows, such stats themselves are at best primitive approximations of only a fraction of the big picture. Similarly, a good flight or air combat simulation will be able to lock into one or another particular performance characteristic with some decisiveness, but such characteristics only remain static and measurable outside the context of their interactions with a host of other performance factors in the real world.

Measuring the quality of such simulations by whether they handle such statistical or performance numbers accurately, then, is only a question of holding them up to the light of radically oversimplified criteria in the first place. Meeting those criteria is no guarantee of 'realism', only a guarantee that the software will accurately reflect one particular model of same.

Nevertheless, even in such reduced terms, criticisms of simulations for not being thorough enough in their modelling is a sign of something important in the way the computer entertainment software industry is changing. These criticisms are coming from adults (and kids) who are eager to be informed about the way the world works, and who see what we've always thought of as 'just entertainment' as a means into deep learning about something technically complex and challenging. Though in some ways sports and air combat simulations might be on the margins of what a larger audience may want to learn about, the criticism of the limitations of current designs provides a valuable clue about the future, where entertainment and learning could well become utterly inseparable experiences.

So we've got an exciting possibility here: the market for computer 'games' may turn into a market for an alternative kind of education that really works. As long as it steers clear from the logic of 'educational'; somehow when people think they're doing something educational these days, they invariably fall back on the kinds of strategies that make professional education such a potentially dreary and mind-numbing experience.

The burning question in all this is, why didn't **Sim Earth** do spectacularly well if modelling realities in a rich, fascinating way seems to be the Ultimate Appeal these days? Could the demand for 'realism' in simulations be coming from just a minuscule fraction of the whole audience? Do most people still want something basically easy and mindless, a lulling opiate to dull their attention at the end of a long day instead of stimulating it? Certainly **Sim Earth**, for all its detail, seems to run somewhat statically; the dynamism in the graphics display is limited to the increase or shrinkage of graphics bars, and the appearance and disappearance of tiles representing plant or animal populations (**Sim Earth** is nevertheless one of my favourite designs despite these facts).

Sierra, Origin and others have made clear that packaging information vividly and in a graphically, sonically intense and fluid form is as important as providing some sort of sophisticated modelling of reality to the user. Playability remains as important a factor in attracting people to a design as realism, and no matter how sophisticated the model becomes, this will remain the case. Sierra's recent **Police Quest 3** is yet another fascinating example of how one can blend a great game and a learning experience into a seamless, attractive whole.

Let those who think they're designing educational software stay with that illusion; the ones really doing it best probably aren't thinking 'education' at all.

Steven Wartofsky

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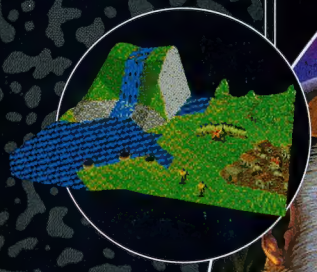

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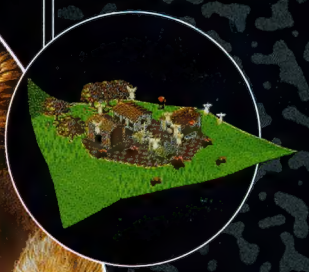

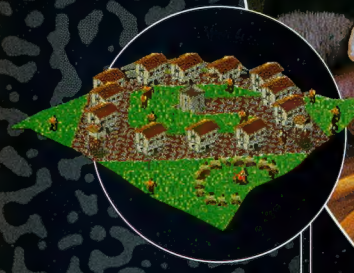

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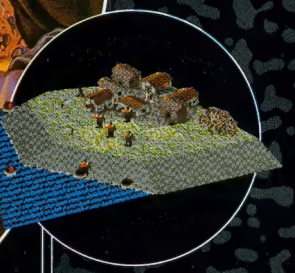

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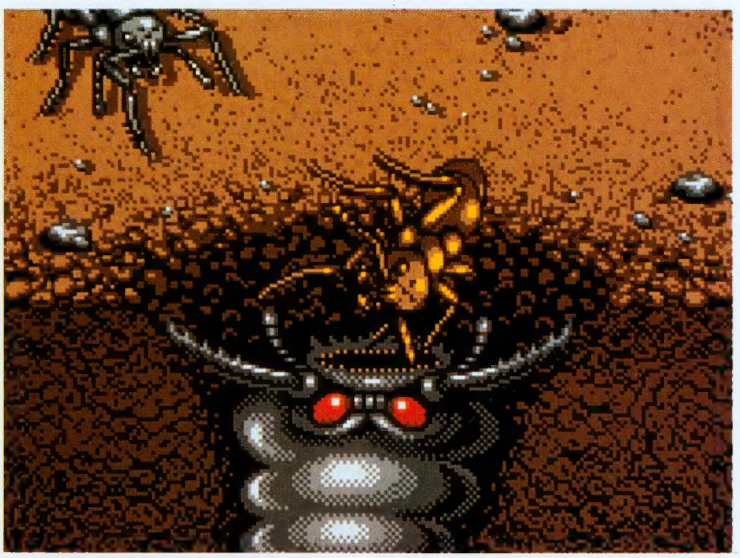
Reader Service No. 2

Sim Ant

Queen of the colony

By Peter Szymonik



First there was **Sim City**, which took the gaming world by storm and instantly hooked many computer gamers. Then there was **Sim Earth**, which was much more of a simulation than a game. People didn't seem to know what to make of it – they either loved it or hated it.

What would come next from the Maxis game factory? All bets were on Sim Galaxy or Sim Universe, but Maxis pulled a fast one and moved down in scale – way, way down to the level of mere insects!

In terms of a game, **Sim Ant** falls in-between **Sim City** and **Sim Earth**. **Sim Ant** shares a lot in common with **Sim Earth** as a detailed simulation, but is more of a game in the **Sim City** vein.

One major difference between **Sim Ant** and its predecessors is that the player actually appears on-screen as a common everyday ant. The player assumes the role of an all-powerful being, but in this case the player is the collective intelligence of the ant colony and is allowed to selectively possess and control any ant in the colony. The possessed ant then directs actions for the ants around him.

There are actually three distinct games in **Sim Ant**. The first is the quick game, in which the task is to take over a small part of a typical suburban backyard by building a successful ant colony.

This is not as easy as it may seem, because a yard can be a very dangerous place. Not only is the player confronted with the task of competing with nasty red ants for the same area, but there are wandering spiders, deadly ant lions, torrential downpours, lawn mowers, human feet, and other nasty and gruesome things out there under the grass.

The full game is the most fun and the most challenging. Forget taking over a little patch of grass – now the task is taking over the entire yard and infesting a human's home! The 'world' map shows the entire lawn squared off into sections with the leftmost third of the map representing the unsuspecting human's home. As the ant colonies spread towards the house, eventually they will be able to spread in the baseboards and walls of the house. Do enough damage and the unfortunate home-owner will be forced to flee!

As in the quick game, however, the task is not easy: there are red ants out also trying to take over the house, and now the player also has to deal with chemical death from insecticide.

Finally there is the experimental game. This scenario is very much like **Sim Earth** because the player is given full control to manipulate the ants and the terrain any way he sees fit. Ants can be added and removed, obstacles can be built, scent markers can be laid and so on. Every nasty thing the player did to ants as a child can be done in this mode.

Stepping out

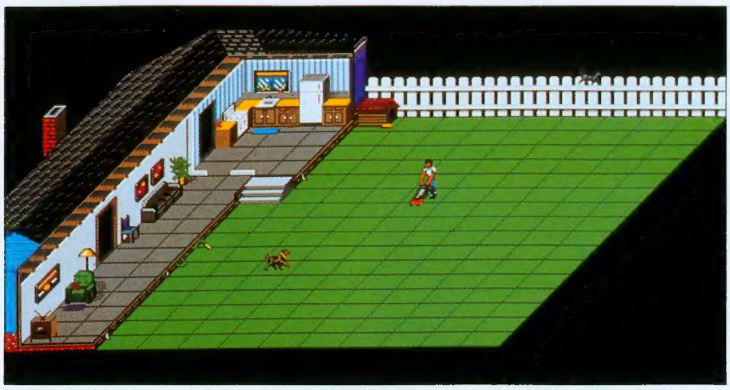
Sim Ant is not an easy game to master, but Maxis is one step of ahead of us. Maxis has included a tutorial that will get a player up and playing the full game in well under 15 minutes! If that isn't good enough, another detailed tutorial is also included in the very well designed manual (a 175-page tome covering not only game play but the science of ants as well.)

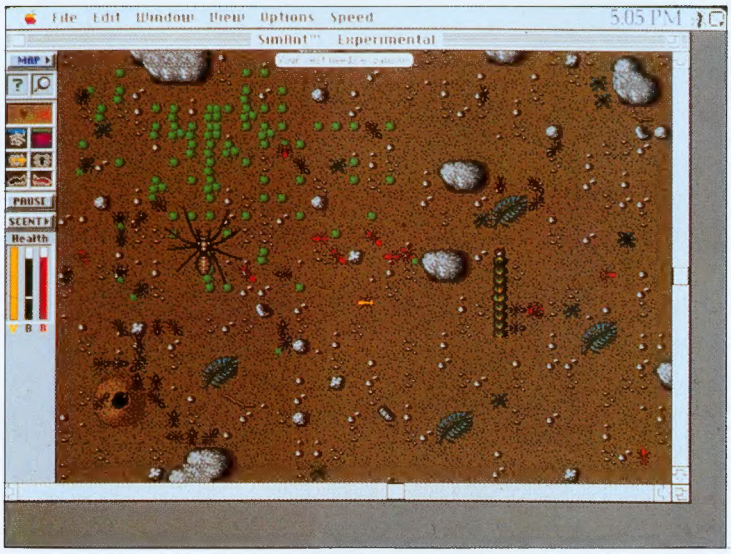
There is plenty to do as an ant. In most games the first objective is to start digging the nest for the queen. Every action in the game is controlled by pointing the mouse to the desired location and clicking on the mouse. The yellow ant (the one the player has taken control of) starts on the surface.

Sim Ant has multiple windows open on-screen. One window shows the immediate location around the controlled ant. This will either be an exploded view of a patch of surface land, or a cut-away drawing of the earth beneath the surface. To start digging, the player simply clicks somewhere underground on the cut-away and the ant gets to work clearing a path underground.

Surface movement is handled in the same way, except that the player can click anywhere on the larger surface perspective and the ant will move to that point.

The second problem is food: ants eat a lot. The initial supply of food is found on the surface in the form of small food pellets. These pellets represent crumbs, dropped candy, leaves, and anything else an ant can eat. Food is very important in the game, be-





cause without it the colony will not grow and ants may die from malnutrition. To make matters more complicated, the red ants are foraging for the same limited supply of food.

After finding a source of food, the yellow ant leaves a trail leading back to the anthill that the other ants follow to grab the rest of the food. Trails and scents can also be left manually or automatically to warn the other ants of danger.

Larvae duck

Once the nest has been dug and food has been found, it's time to get the ants organized and working for the greater good – expansion. There are two special windows labelled 'behavior' and 'caste'. In these two windows the player can assign jobs to various ants. These jobs are forage (grab food), nurse (care for the queen and guard the young larvae), or dig (expand the nest.)

These are set using a pointer in a triangle, each corner of the triangle representing each of the three jobs (that is, move the pointer to the middle and each job will be doled out to 33% of the ants in the colony.) The caste window is identical, except that here the player can set ant production between soldiers, breeders, and workers.

There are plenty of information screens to help the player determine the condition and well-being of his colony. Once the colony is on its feet and running smoothly, it's time to take out the enemy.

The red ant colony can be attacked by possessing a soldier ant (any ant will do, but a soldier ant stands a far better chance of leading a successful raid). Clicking on the ant brings up a menu. Using this menu, ants can be recruited to follow the possessed ant, they can be released to go back to their originally assigned tasks, or the player can opt to take over a different ant.

The soldier ant should recruit at least 40 ants. These ants will follow the possessed soldier ant wherever he goes on the screen, and the ant under control should head straight for the red ant colony. Pitched battles are fought all along the way as the black ant swarm moves closer to the red colony and begins to engage the red ants in life-or-death combat – it's almost like watching the real thing!

If successful, the black ants will penetrate the red anthill and then the queen has to be killed. Take her out and the red ants are doomed. If the attack fails and the possessed ant is killed en route, the ant will be reborn in the friendly black ant colony as a new larva and can try again once the resources are mustered again.

In the quick game, the player wins by defeating one red ant colony; in the full game, he has carefully to watch the action move across 144 patches of land (including the house) and take control of colonies as needed to redirect their actions. This may sound like a massive undertaking and while it certainly is not an easy task, the game actually plays itself once the first patch has been conquered.

All right mate

Extending the colony across the yard is accomplished by creating breeders in the nest after the red ants have been defeated (breeders require a lot of food!).

After creating a suffice number of new queens and winged males, a mating flight is activated and the game either randomly distributes the newly fertile queens across the yard, or the player can select the next patch to be infested. And remember, the red ants are also extending their reach across the yard and into the house as well!

The game continues until all the red ants across the entire yard have been defeated, and 70% of the patches in the house are infested by black ants.

Sim Ant is a lot of fun to play, in fact, it may be almost too addictive. There is always just one more patch of land to conquer and the first house square is only a few patches away. People will overdose on this game and play it to death when they first get it, but the novelty does tend to wear off after a while.

The game's replay value is subjective, but there are enough variables to make every game just a little different, and the experimental game is great for those boring weekends when there is nothing better to do.

People who liked **Sim Earth** will find that **Sim Ant** makes an excellent addition to their collection. ❑

Designed by
Will Wright and Justin McCormick

Published by
Maxis

UK distributor
TBA

Systems
Mac; IBM PC and Amiga to follow

PC graphics
VGA, EGA, MCGA, Tandy, Hercules

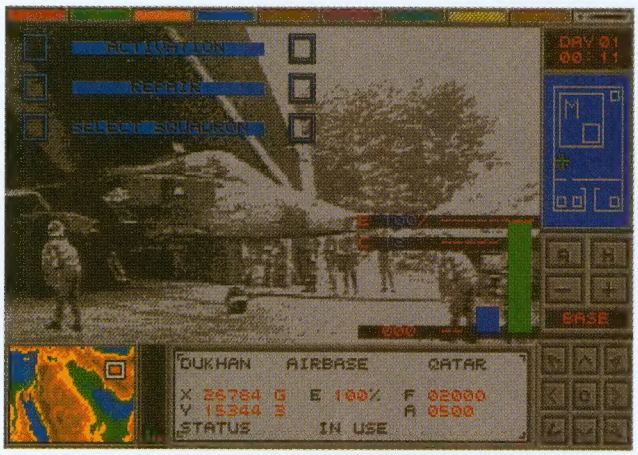
Mac graphics
Monochrome and 16-bit

Amiga graphics
Multisync recommended for high resolution interface

Fighter Command

Ground control to General Norm

By George Campbell



Designed by
David Lester and Simon Bradbury

Published by
Impressions

US distributor
To be announced

Systems
Amiga and ST; IBM PC version to follow shortly

Fighter Command is designed to simulate modern air campaigns with the emphasis on strategic planning rather than flying around blasting things out of the sky. The combat module included on the disk covers the Middle East theatre, presumably with more modules due to appear in the future.

Ground and naval units play no part in the game, apart from ground support systems and numerous targets. There are 28 scenarios, weighted according to difficulty and complexity. Difficulty indicates the level of skill required to achieve victory, and there are a wide range of dissimilar positions to play. Complexity relates mainly to the number of air assets which have to be manipulated.

The scenarios cover short duration wars: from two-nation affairs to conflicts affecting upwards of half a dozen countries. At the lowest level minnows like Lebanon and Jordan fight it out, Lebanon using just 15 combat aircraft. At the other end of the scale Iran, Iraq, Syria, Jordan and the Sudan face off against Saudi Arabia, Qatar, United Arab Emirates and the United States.

The primary objective is to gain air superiority, by knocking the enemy air force out of the sky and putting his air bases permanently out of commission. It is also possible to cause sufficient civilian unrest to force a withdrawal or overthrow of the current government.

In some scenarios media opinion is a major factor. In general, however, elimination of a great proportion of the enemy's aircraft will be necessary to achieve victory.

To assist in the prosecution of an air campaign there are radar systems, surface-to-surface and surface-to-air missiles. Missiles include Exocet, Patriot, Scud, and the less familiar Soviet SA-8. SSMs can be extremely effective, enabling strikes to be launched against enemy targets with virtual impunity. The radar systems include mobile ground installations and high value airborne systems such as the E-3 Sentry.

There are 19 different combat aircraft, from the elderly Mig-21, Su-7 and B-52 to the Mig-29 and F-117. The Su-24 Fencer is mentioned in the manual but I didn't notice it appearing in any scenario. Aircraft are defined by five specifications: High Level Bombing (B); Ground Strike Rating (GS); Armour Strike Rating (AS); Aerial Combat Rating (AA); and Operational Ceiling Altitude (ALT).

There are four helicopter types in **Fighter Command**: the Lynx, Apache, Hind and UH-1 Huey. They occupy a peculiar niche in the game because there are no appropriate targets for them. Therefore, instead of attacking troop formations and vehicle concentrations the helicopters are treated as extremely slow attack aircraft.

There are three map types, each of which will be used frequently. The strategic map displays, among other things, radar coverage and unit displays. The radar map shows the location of aircraft, bases, installations and civilian targets. The satellite map displays the aircraft sprites, enabling individual identification, and close up views of fixed targets.

Time passes quickly, at the rate of approximately 40 minutes for 1 minute of real time. Attacking aircraft can make up a lot of ground in a short time, preventing wholesale interception in the more complex scenarios. Game speed can also be altered to 'fast' which doubles the rate at which time passes – not recommended during the early part of a scenario.

As the war rages resources are depleted and an eye must be kept on them from time to time using the resource management screen. This gives an indication of the time left before the supply situation becomes critical. For the most part this is not something to worry about as it plays second fiddle to the air action.

The real-time game play is quite frantic during the initial phase of a scenario, becoming more of a problem as the number of units being controlled increases. There can be anything up to 18 air bases and over 800 aircraft to control (admittedly the aircraft are in packets of up to eight). It is therefore impossible to react effectively to each and every threat.

The artificial intelligence (AI) is not always very smart when it comes to intercepting your aircraft and cruise missiles, but this is only obvious when its resources are limited.

The AI will also press on with attacks which are doomed to failure rather than conserving and concentrating its forces. It also has a tendency to leave AWACS-type aircraft with no covering fighters.

Air support

It'll be interesting to see what is produced in support of **Fighter Command**. The units appearing in the scenarios are quickly superseded by world developments. For example, the Iranians are thinking about buying the Su-27 Flanker, Mig-31 Foxhound, Su-25T Frogfoot, and Mi-28 Havoc. An East-West conflict no longer seems so appealing as a game subject so a shift to China, Japan, and Mongolia would be welcome. **Fighter Command** is certainly an adaptable system and shows that Impressions is improving its products apace. ❑

BRAVO ROMEO DELTA

ATTENTION... THIS IS NOT A DRILL!

During a major Soviet naval exercise, 50% of the ballistic missile subs are deployed to sea and a limited nuclear strike is launched on American targets. At 3:58AM NORAD picks up the first incoming nuclear warheads, targeted for US Air Bases, and with less than 6 minutes to impact.

SS-18 Satan: The largest, most powerful ICBM ever built, the SS-18 is a two stage, liquid propelled 'heavy' missile. Available with either a single, highly accurate, high yield warhead, or 10 MIRVs (multiple independently targeted reentry vehicle), the Pentagon claims that the SS-18 was "specifically designed to attack and dstroy ICBM silos and other hard targets" in the USA.

As the Chief Target Planner at the Strategic Air Command, it is your responsibility to launch a limited second strike. The targets selected should demonstrate the resolve of your political leadership, while not escalating the conflict.

Defined by the Federal Preparedness Agency (FPA), a controlled conflict is, in part, one in which the contending powers use or threaten to use military force, including nuclear weapons on a scale restricted enough to avoid precipitating a general war.

This concept of Escalation Control is the strategic policy embodied in the Presidential Directive 59 (PD-59) which states that the U.S should be able to initiate the limited or selected use of strategic nuclear weapons, and to control the escalation process in such a way that democracy would continue to "prevail" in the post-war world.

Single Shot Kill Probability (SSP_k)
Given a warhead yield (Y) in kilotons, accuracy in meters, and target blast hardness (H) in PSI, the following equation is used:

$$SSP_k = 1-(0.5)^x$$

Where x can range from:

$$x = (1340Y^{1/3} / Accuracy)^2$$

for soft targets (0-50 PSI hardness) to

$$x = ((438Y^{1/3}/H^{1/3})/Accuracy)^2$$

for hard targets (over 1000 PSI)

More than 80 percent of Soviet ICBMs, carrying more than 95 percent of the Soviet ICBM-based warheads are ready to be launched within minutes from their day-to-day alert status. 30 to 40 percent of Soviet SSBNs are on day-to-day alert, with roughly 20 percent of Soviet SSBNs on station at any given time to launch retaliatory strikes. -- Potapov, I.N. Nauchno-tekhicheskiy progress i flot (Voyenizdat, 1977) p. 129

*(From the **Bravo Romeo Delta** Designer's Notes)*

The implementation of PD-59 is your job. **Bravo Romeo Delta** gives you complete command of U.S. Strategic forces, including ICBMs, SLBMs, SSBNs, Bomber Bases, and provides you with all tactical warning and attack assement complements of NORAD. This is a real-time simulation, with no punches pulled.

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Bravo Romeo Delta has a suggested retail price of $59.95.
Amiga version available soon.
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Reader Service No. 35

THE THINK TANK

Stuart Mitchell offers some clues for The Lost Admiral

The Lost Admiral is one of the most enjoyable strategy games I've played in an excellent year for excellent strategy games.

Promoted as a naval game, **The Lost Admiral** (**TLA**) is a closer kin to chess than to **Harpoon**. Players will find themselves confronted with knotty tactical and strategic problems that will tax their both their ingenuity and nerves.

Tactics

Players must master the tactical nuances of **TLA**. This mastery requires an understanding of how each ship type interacts with other ship types. A careful study of the chart on the back of Map 9 is in order. I will describe a basic task force of ships and its employment, but first examine each ship in detail.

Battleships are devastating to virtually every other ship in **TLA**. Against battleships players should only use submerged subs, other battleships, or cruisers. For their part battleships should be used against destroyers, surfaced subs, carriers, PT boats, ATs, transports, and cruisers. Carriers are excellent intelligence tools and provide support to surrounding battles. However, carriers should never be used in battle directly except against PT boats, ATs and transports.

Cruisers are said to be good all-around ships. I find them to be too expensive and too vulnerable. Instead of two cruisers, I would recommend two subs and a destroyer. During play, it may be necessary to develop a cruiser rather than wait on more powerful ships. Use cruisers against PT boats, ATs, transports, destroyers, and subs. Note that in a direct confrontation, a cruiser will be exchanged for a sub.

Destroyers should be primarily used against subs. They can also be used against PT boats, ATs, and transports. In a pinch, a destroyer can be exchanged for a carrier. Destroyers are very vulnerable to battleships and cruisers and should avoid these ships like the plague.

Subs are possibly the most important ship in the game. Their proper use will allow players to beat superior forces. However, they are tricky to use and cannot take on enemy task forces alone. In general, subs should be submerged before entering battle. When submerged, subs should only tackle battleships, carriers, cruisers, ATs, and transports. Under no circumstances should a sub (submerged or surfaced) tangle with destroyers or PT boats.

PT boats are surprisingly important ships. They can be used to raid behind enemy lines. They are the cheapest, quickest anti-sub ship. And they are crucial in behind-the-lines garrisons. When resources allow, I place a PT boat in every friendly port. A PT boat can drive off enemy ATs, PT boats, subs, and of course transports. I don't generally send PT boats out with task forces as they are simply too vulnerable.

ATs are in some ways the most valuable ships in the game as they are the primary source of victory points. Their fast speed and limited self-defence make them very much the preferred transport. I generally build ATs at the beginning of the game for all the neutral ports I intend to grab. ATs by themselves are a poor garrison, but paired with a PT boat, they can take on most raiders. Transports should be built for all starting ports.

In addition, build transports to send along with task forces that are intended to take an enemy port in the early going. Once the game is started, I rarely find it useful to build transports, opting for the AT instead.

Task forces

Ships should generally be deployed in carefully constructed task forces. A task force should be built with a mission in mind, usually attack or

defence. My recommended task force for either mission is a carrier, two battleships, two destroyers, and two subs. A defensive task force can get by with one battleship and two PT boats instead of the two destroyers. The task force should be advanced at a the rate of its slowest ships (two spaces
a turn).

The lead elements should be the battleships. Battleships can take any combination of hits from enemy ships and survive. Thus, if the task force is surprised, the battleships will take the initial blow allowing the task force to rotate appropriate ships. A typical example might be enemy subs stumbling onto friendly battleships. If the enemy subs are submerged, rotate friendly destroyers and finish off the subs.

Use the carrier to spot vulnerable enemy ships. Spotting and eliminating enemy destroyers and PT boats should be a priority. This ensures that friendly subs can operate unhindered against the enemy. The carrier's intelligence is more important than its combat ability or support ability. Keep the carrier out of combat except against small ships or heavily damaged ships.

One defensive tactic is to use subs in ports. This is only useful against enemy capital ships, but can be devastating. A port defended by a submerged sub and threatened by an enemy battleship or cruiser can hold out indefinitely against these ships. But beware, raiders usually take the form of destroyers or PT boats; against these ships, a sub is a poor defender.

Strategy

Never lose sight of the fact that victory is obtained from victory points. Victory points are accrued by holding ports with transports, not by sinking enemy ships. It can be tempting to go after a large vulnerable enemy ship, but be sure the ultimate goal is always kept in mind. During build phase, create a transport for each friendly port. Create an AT or transport for each neutral port that can be reached before the enemy. In general, ATs are best for this task unless the port is reachable in two turns or less.

Decide which enemy ports are to be attacked. Also determine which ports are likely to send out attacking task forces. Create task forces at the frontline ports that are going to initiate or receive attacks. Be sure to create strong task forces rather than several weak ones. In a pinch, a couple of subs and destroyers can be sufficient to hold a friendly port against a strong enemy attack, at least for a while.

In longer scenarios, target the 200-point cities. One excellent strategy is to wrest these away from the enemy to prevent it from augmenting its fleet. Even a temporarily successful raid can have a disastrous effect on production.

Whenever possible, send out raiders. The best raiders are destroyers. These ships should be sent behind enemy lines looking for vulnerable ports, but be warned that behind-the-lines 200-point ports often hold new and powerful ships.

When being raided, discretion is often the better part of valour. If the enemy attacks and the friendly transport is still alive, move out. Wait a bit, then try to return. Often the enemy raiders have moved on and the worst that is suffered is a turn or two with no victory points. Beware of the enemy doing the same. After driving an enemy transport away, leave the raiding ship in the port for a turn. Often a transport will be netted as it attempts to return.

For vital ports, gun emplacements can be useful. Unfortunately, they must be bought at the beginning of the scenario, so plan ahead. If in doubt, I pass on them because the money is often better spent on another AT. Be sure to purchase sufficient ATs to take not only neutral ports, but also enemy ports. Send a couple of ATs with a group of raiders. This strategy can net some easy ports.

Campaigns

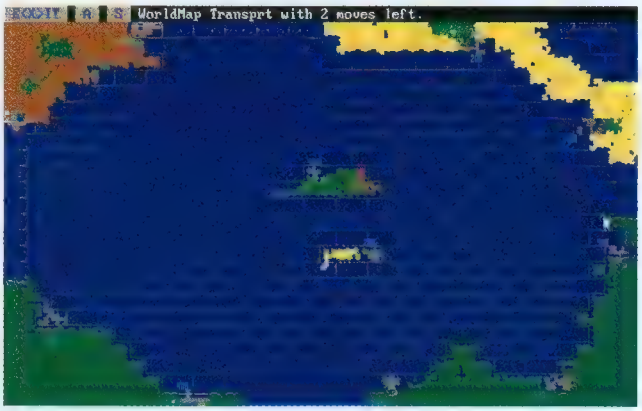
In the campaign games, focus on protecting flagships in the first scenario. The obverse is also recommended: seek out and destroy the enemy flagships. This is the one time that I recommend subordinating victory points to the sinking of enemy ships. The increased strength of flagships in subsequent scenarios transforms them into super ships that can take on all comers. A strong flagship can often take on a whole enemy task force.

Tricks and tips

When chasing down a wounded battleship, cruiser or carrier, move a friendly carrier to the last known location of that ship. The wounded ship can move only two spaces and so must be in range of the carrier's intelligence.

Obviously this move should be made before any others. When an enemy task force is spotted, move submerged subs in front of the enemy battleships. This can devastate the enemy task force, particularly if the enemy destroyers can be spotted and eliminated with friendly battleships.

As White, the use of PT boats and ATs as port garrisons is important. This is owing to a quirk in the rules where all ships repair after the Red turn. This advantage is lost to White if Red moves in with a transport. As Red, this garrison approach does not work nearly so well. But Red does have one advantage that partly compensates. Ships are built in ports that have flags for their side during the turn of their arrival.



This is true even if the port has lost its transport. Flags are lost at the end of Red's turn, not White's. So even if White eliminates the transport in a 200-point port, Red will still receive the ships due to arrive that turn and these might include another transport.

Repair damaged ships – it's cheaper and sometimes quicker than building a new ship. Also, defend in home ports. The repair capability can turn the tide.

Don't forget the ability to rotate through a stack of ships in a home port. This capability allows fresh ships to be used in defence.

The Lost Admiral is a fast-paced but tricky game of naval conflict. Look for patterns in the movement of enemy ships.

These patterns can be learned and exploited. This is the human player's primary edge in the long climb back to the Admiralty. ❑

Designed by
Thurston Seafross and Bruce Williams Zaccagnino

Published by
QQP

Systems
IBM PC

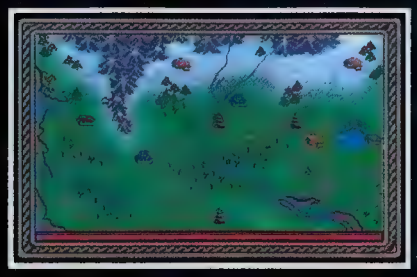
PC graphics
EGA, VGA

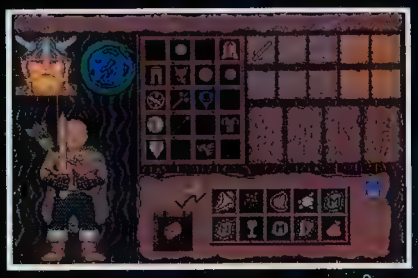
Supports
Adlib sound board; keyboard and mouse

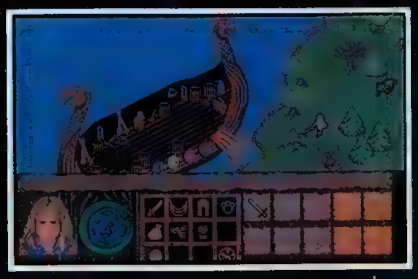
Players
1–2

Dusk of the Gods

ENTER THE HALLS OF VAHALLA...







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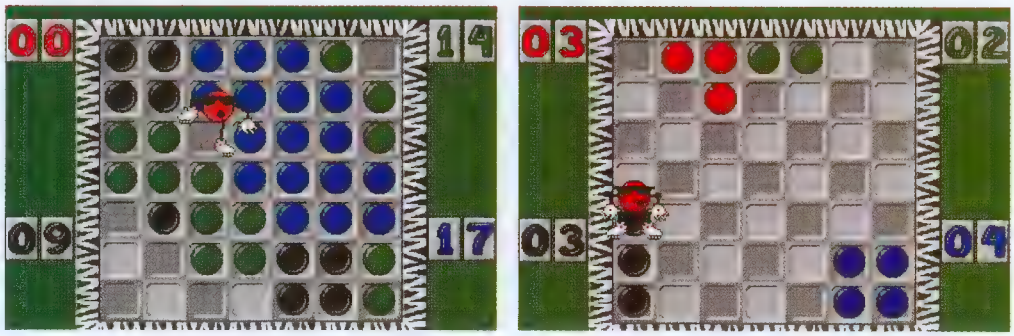


SPOT ON

John Scott recalls some abstract thoughts

As I've often mentioned before, for me the essential first step in reviewing a game is to brew up some coffee to sustain me through what can often be a gruelling and exhausting experience *(I do the same when editing reviews – Ed)*.

On this occasion something fairly unique happened. I sat down with my steaming mug of black elixir, loaded up an innocent looking game called **Spot**, and had a few quick games. Time for a sip of coffee. Yeuck! Freezing cold! And the clock suddenly appeared to have leapt forward by over an hour! What could it all mean? Had I been caught up in some sort of bizarre time warp? Actually it's just that **Spot** is a damn fine game.

Spot is similar in a number of ways to another favourite game of mine, Othello (aka Reversi), but is different enough to be exciting and to require totally different tactics.

The game is played on a 7x7 board. In the basic two-player game each player starts with two counters in diagonally opposite corners, and the object is to end the game with more counters than your opponent.

Counter ten

There are two ways to increase your counters. The first is quite simply to clone a counter. This occurs whenever a counter is moved one space into any adjacent vacant space (Vertical, diagonal or horizontal). In this case, a new counter appears in the new square, and the original counter remains where it was.

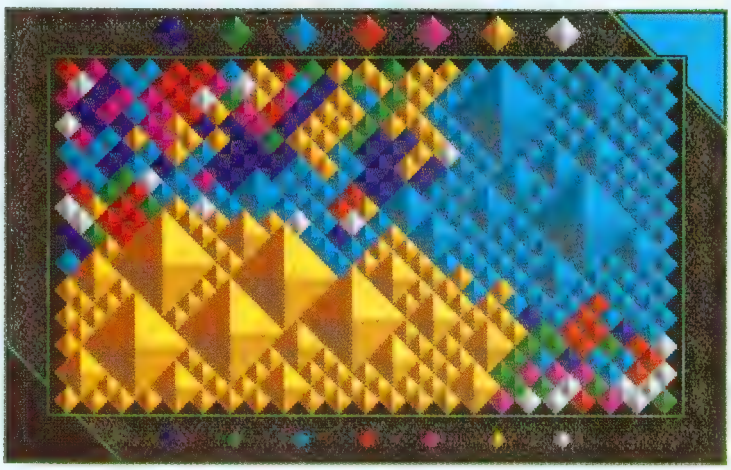
The second, more effective way to gain counters is to capture those belonging to the other player, and this is done by moving into a square adjacent to an enemy counter, at which point all adjacent enemy counters will do a spectacular flip into the air and come down again the colour of the player who captured them.

This very simple capture rule means that, as in Othello, one wrong move can lead to catastrophe. For example, if a player manages to jump into a square totally surrounded by enemy pieces then he will capture eight counters.

When a counter jumps it can move into a vacant square two spaces away, or can make an L-shaped move (like the knight in chess). When jumping, a counter doesn't clone – it simply changes position.

This really is one of those games which can be learned in a minute yet offers enough strategic possibilities to last for a long, long time. Implementation of the game is about as good as it could be. For those who feel that a computer game isn't a real computer game unless it has bells and whistles, the superbly animated character of Spot appears every time a player moves and – with appropriate music – jumps, dives, or dances from square to square. This is a lot of fun to watch – once or twice. After that, thankfully, it can be turned off by using the options screen.

Seven up: Spot (top). Bright outlook: 7 Colors (below)



Wise up

This screen is also used to determine the number of players (one to four) and which are to be controlled by the computer. Computer skill levels can be set from one to nine. Level one is utterly stupid – it's usually possible to capture all the computer's pieces in about five moves. The machine soon manages to wise up considerably at the higher levels. It's also possible to choose a variety of oddly constructed boards or to create your own, and each new board will call for a different strategic approach.

For those perverted beings who like to play this kind of game under pressure, there are a number of timer options. For each player, a time limit of five to forty seconds per move can be set.

A more vicious option is to set the overall game clock. This allocates

SPOT

Designed by
G Devine II and R Stein

Published by
Virgin/Leisure Genius

Systems
IBM PC, Amiga, ST

Players
1–4

7 COLORS

Designed by
Dimitri Pashkov

Published by
Infogrames

Systems
IBM PC, Amiga, ST

Players
1–2

Full-bodied whine: 7 Colors (right and below) favours the human factor

the maximum 'thinking time' allowed to each player for the whole of the game. When play passes to a player a clock appears on screen showing the amount of game time remaining for that player, and this begins to count down until they make their move. Once the counter reaches zero that player can take no more moves.

The options screen also has an 'extras' button which can be toggled on and off. What is an extras button? Well, to quote the manual: 'It won't affect the way the game is configured. It is in fact a bonus button for you to play with – it does nothing!' Well, maybe. To my suspicious nature, it seems far more likely that extras were planned, but didn't make it past the drawing board stage. Not that **Spot** needs extras – it's an excellent little game.

My other abstract strategy game this month is called **7 Colors**. This game appears to have an impressive pedigree, being the brainchild of Russian mathematician Demitri Pashkov.

Like **Spot**, this is a very simple game to play, though my initial quibble was that I found the rules in the manual far from clear. As a result I played my first couple of games without any idea about what was actually going on. This wasn't too big a problem, since the game is essentially very easy and quick to learn, but now that I come to try to explain the darn thing myself, I see that it's an awful lot easier to play than it is to explain.

This game (for two players only) is played on a battle terrain of many colours (well, seven). Each player begins with a single square, and captures areas of the board by changing colours. For example, if a player is currently white, but has a lot of adjacent red areas, then by choosing red on his next turn he annexes those red zones, and his entire territory turns red. The first player to capture more than fifty percent of the board wins the game. (Hmm... that wasn't as difficult to explain as I thought!).

The tactics adopted will depend to a large extent on the layout of a particular board. In some cases it's best to drive for nearby large areas of a single colour, in others a wiser course of action might be to attempt to set up barriers to limit enemy expansion. In the early levels of the game each square on the board is huge, making for a very short contest. In future matches the squares get progressively smaller, to the point of being hazardous to the eyesight! Also in later levels barriers are set up to impede the progress of players.

Gong wrong

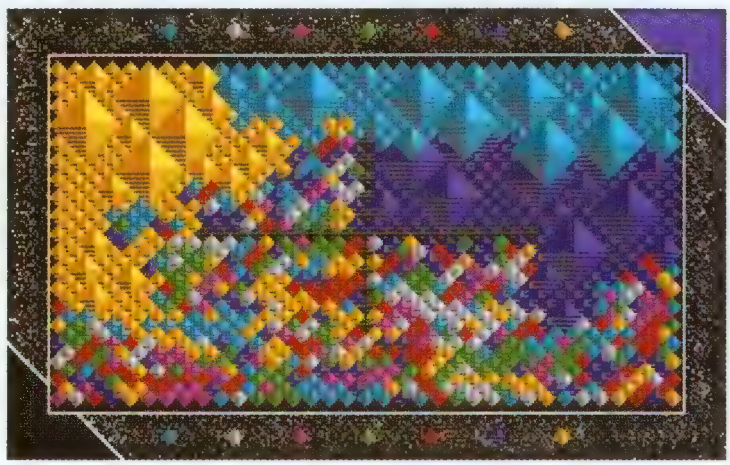
The little classical tune which accompanies the game is, as is so often the case, pleasant at first but infuriating after the first few repetitions – a bit like those little tunes some switchboards play when they put callers in the purgatory generally known as 'hold'. Again, it can be switched off and replaced by purely functional sound effects.

There is a limit on how long a player can ponder his next move – should one contemplate one's next brilliant action for too long, a gong will ring out the message. In practice this will probably only happen if you leave the game to go answer the phone or make coffee and forget to pause the game.

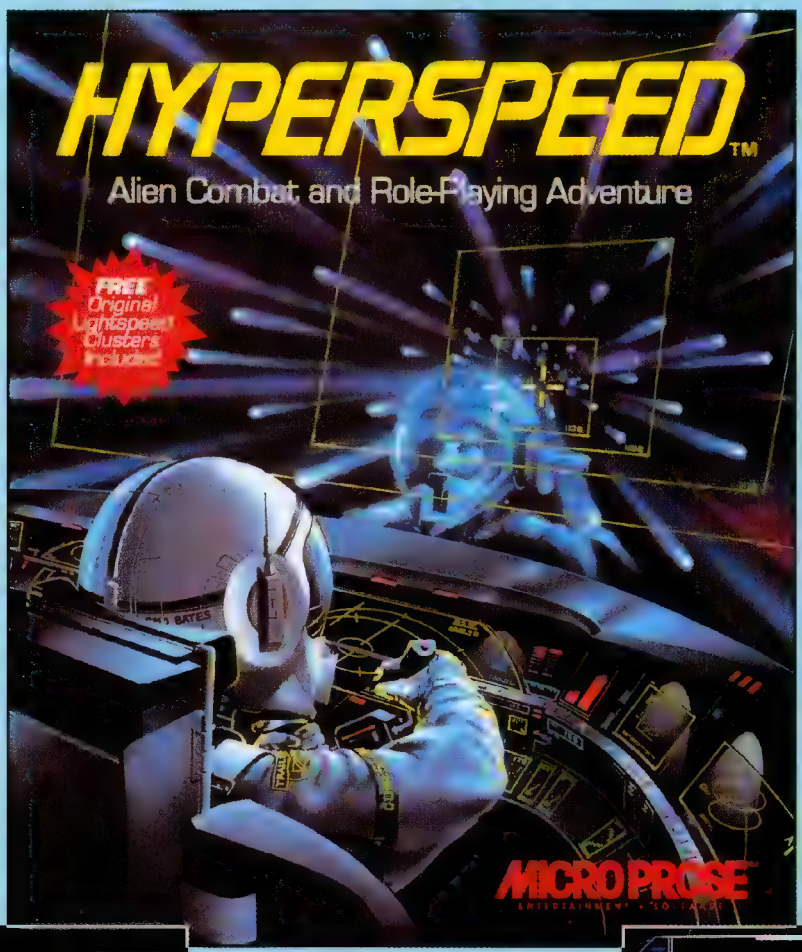
I found that I could trash the computer opposition in **7 Colors** without any trouble whatsoever – it was so easy that I got fed up rather quickly. This game is definitely much better played against another human, in which case it has quite a high 'whine-factor' as each player will be convinced that the layout of the terrain favours his opponent. To resolve these arguments, there is an option to replay the same terrain, but with players' starting positions reversed.

The options screen controls all aspects of the game, and also provides an editor for producing custom-made terrains. In comparing the two games, I would have to begin by saying that **7 Colors** is not in any way a bad game. When played against another human opponent we both had a lot of fun with it. I also have to say that it suffers when compared with **Spot**, which seems likely to become one of my all time favourite games.

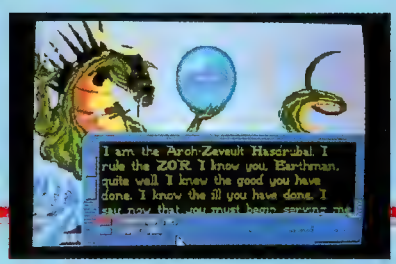
Let me put it like this: after playing **7 Colors** for a while, my opponent's response was 'Very enjoyable – a really good game!' After playing **Spot**, I had difficulty beating them away from my keyboard and persuading them to go home. I think that sums it up. I know I'll still be playing **Spot** long after **7 Colors** is relegated to the 'other games' shelf. ❑



"Aliens approaching... fightercraft launched."



IBM-PC screens shown.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BEAT THE BULGE

Peter Szymonik helps Patton strike back

Patton Strikes Back is Chris Crawford's 'wargame for non-wargamers'. The game has a fantastic user interface and high playability; it should appeal to gamers who have never tried a computer wargame before. The game is also very educational and incorporates many innovations in game design. But although **Patton Strikes Back** is a very playable computer game, it's also a very challenging conflict simulation.

This game analysis is based on a human American player slugging it out against a computer-run German opponent. I decided to cover the American player's perspective for a number of reasons. The first is that it's human nature to want to play the 'good' and 'winning' side. Since the Germans did lose this battle, most gamers will probably want to start by playing the American side first.

The second is that German strategy is relatively straightforward: hit the Americans hard and drive the Panzers as far west as possible before Patton arrives and Allied air power becomes available.

Finally, playing the game as the German is the ultimate challenge in the game. History is against them and most players won't want to tackle playing the game as the Germans until they have mastered the game.

The first order of business is to change the screen display from strategic to tactical. The overall situation on the battlefield can quickly be determined from the strategic display, but orders should be given at the tactical level. While relative unit strength can be determined with a mouse click and a pull down menu on the strategic display, the tactical display shows even more detail – unit strength is always known by the size of the unit symbols. On the strategic map it's far too easy to send a small American force against an entire Panzer division.

The battle begins with the American player in big trouble. The front line is manned by inexperienced and demoralized troops, there is no sign of reinforcements, bad weather has been lingering for days, and that means no air support. Hundreds of German tanks come rumbling out of the woods, supported by thousands of Hitler's most battle-hardened troops. Needless to say, the first few turns of **Patton Strikes Back** are completely dictated by the Germans.

These turns are crucial for the American player. If he manages to slow the German advance long enough for Patton's lead units to arrive, then he stands a good chance of throwing back the Germans as they over-extend their supply lines.

If the American player fails and the Germans reach the Muese River early in the game, the rest of the game is pretty much over.

The only real asset the American player has early on is defendable terrain. A few well entrenched troops in fortified positions can bring even a mighty German Panzer division to a screeching halt. There are two places on the **Patton Strikes Back** map where the American player stands a decent chance of stopping a German advance early on in the game.

The first is the area directly east of Trois Ponts and Spa. Without any hesitation, all four American units east of these towns should head right into the woods to form a defensive line. As the battle progresses, these units will inevitably be thrown back to the road between Trois Ponts and Spa, but their stalling action is crucial to keep the Germans bogged down up North.

The American 1st Infantry division is the first reinforcement to arrive on the scene and should immediately be thrown into this defensive line to prevent the Germans from taking the bridge just south of Trois Ponts.

Even chances

The second defendable area is down south near Ettelbruck. Here the 4th Infantry stands a better than even chance of holding off the German advance by entrenching itself in the city, or on one of the two bridges west or south of the city.

One warning though, when the Germans smash the defences in Clervaux, immediately send the 4th Infantry west towards Bastogne along the Sure River. Once Clervaux falls this unit will be out of supply and a sitting duck.

I said *when* the Germans smash the defences at Clervaux because the Germans *will* smash the defences around Clervaux. This city is the weakest

point in the American line and the Americans stand little chance of holding off the German onslaught here. It will soon be clear to anyone playing this game why this was called the Battle of the Bulge. The area in Luxembourg between St Vith and Clervaux will be pounded by advancing German armour and there are few American units around to do much of anything about it.

The Germans stand to inflict heavy and possibility irreparable damage when they smash through Clearvaux and St Vith. The American player must pay very careful attention to what happens here and as reinforcements arrive they should be sent to the area between Bastogne and Werbomont to prevent a German breakout from getting out of hand. Likewise the German should concentrate all his efforts towards breaking the American line at this point. A serious breach here will push the German advance deep behind American lines, but more importantly it will cut off American supply lines to the north and south.

Real estate

By far the two most important pieces of real estate for both players are the city of Bastogne and the road junction just north of Houffalize and east of Vielsham. If the American player can control these two sites, he can cut deny supply lines for any German units looking to advance on the Ourthe River. If the German player can control these two sites, he can deny supply to any defending American units holed up defending bridges and towns east of these points.

Supply is a big part of the game and it is imperative that the player doesn't get so involved on the tactical level that he fails to consult the strategic display. Remember to check those supply lines every few hours. No other piece of information will relate the strength and effectiveness of the German attack better than a quick look at the American and German supply lines. If a supply line behind the front lines is suddenly cut, it's a sure bet that a German Panzer unit is running around in the rear area wreaking havoc on logistics.

It is also important to remember that German units will only be visible if they are in a friendly zone of control (ZOC). Keep this in mind because when a friendly unit is destroyed, the German units will disappear from view unless they happen to be in another friendly ZOC. Without paying attention to this fact, supply lines can be cut in a matter of hours as German units stream through a newly formed breach.

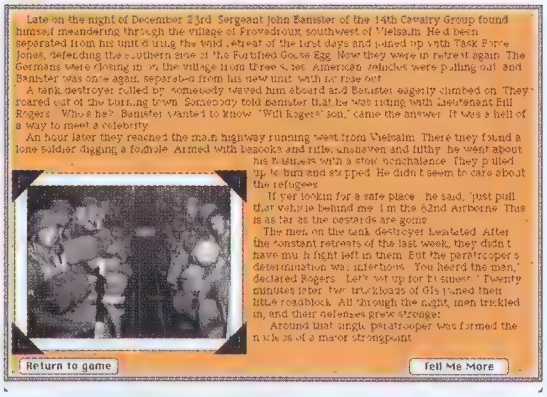
The German's main goal is to seize as many bridges and other landmarks as possible before the Americans can put up a viable defence. The American player should immediately fall back and send as many units as possible into cities, towns, vital road junctions, and bridges. Once they arrive at these key points, they should immediately be placed in defensive mode. Even a handful of American troops in defensive mode in a city or on a fortified bridge will bring a German advance to a standstill. The most defensible position is in a town behind a river.

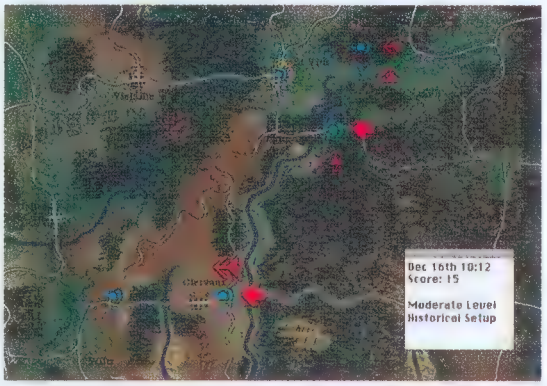
As the battle progresses, both players need to keep their units organized. Be aware of potential traffic jams caused when two or more units try to cross the same piece of land – nothing is more frustrating than realizing a unit hasn't been obeying orders because its been stopped in its tracks by a friendly unit!

Above all else, don't let units get surrounded. In some situations the American player will have no choice but to leave an unsupported unit behind to defend a critical bridge or city, but if at all possible, units should be pulled out just before the Germans arrive to prepare the next defensive position. Flank attacks and attacks from behind are extremely effective in dislodging enemy units.

Allied air power is devastating. On December 23rd the American player will enjoy air support and the arrival of Patton's armour. This is when the tide will turn and the American player can go on the offensive. Even the largest German armour formations can be left shattered after an American air strike, especially if the division is caught in the open in mobile mode.

Air power can also be used to cut German supply lines, one well placed strike on a road junction can cut supply to thousands of German troops deep behind the French border. As an added bonus, once air power is available the American player can uncover the positions of all the German units regardless of whether they are in American ZOCs.


Late on the night of December 23rd Sergeant John Banister of the 14th Cavalry Group found himself meandering through the village of Provedroux, southwest of Vielsalm. He'd been separated from his unit during the wild retreat of the first days and joined up with Task Force Jones, defending the southern side of the Fortified Goose Egg. Now they were in retreat again. The Germans were closing in on the village from three sides. American vehicles were pulling out and Banister was once again separated from his new unit with no rear out.
A tank destroyer rolled up, somebody waved him aboard and Banister eagerly climbed on. They roared out of the burning town. Somebody told Banister that he was riding with Lieutenant Bill Rogers. "Who's he?" Banister wanted to know. "Will Rogers' son," came the answer. It was a hell of a way to meet a celebrity.
An hour later they reached the main highway running west from Vielsalm. There they found a lone soldier digging a foxhole. Armed with bazooka and rifle, unshaven and filthy, he went about his business with a stoic nonchalance. They pulled up to him and stopped. He didn't seem to care about the refugees.
"If yer lookin for a safe place," he said, "just pull that vehicle behind me. I'm the 82nd Airborne. This is as far as the bastards are gonna."
The men on the tank destroyer hesitated. After the constant retreats of the last week, they didn't have much left in them. But the paratrooper's determination was infectious. "You heard the man," declared Rogers. "Let's set up for the night." Twenty minutes later, two truckloads of GIs joined their little roadblock. All through the night, men trickled in, and their defenses grew stronger.
Around that single paratrooper was formed the nucleus of a major strongpoint.
Return to game
Tell Me More



The last four days of the battle becomes a massive slugfest as the Germans and Americans fight over strategic landmarks. The game ends December 28th and the player gets points for destroying enemy units, preserving friendly units, and capturing landmarks (especially bridges!) The bridges on the Muese River are the most valuable and the German gain lots of points of holding onto them until the end of the game.

On a final note, there is one quirk in the game that the player should make note of. When a unit is in mobile mode, it will automatically change into attack mode if it moves next to an enemy unit. Similarly, if a unit is in attack mode, it will automatically revert to mobile mode if there is no unit to attack. This saves time while playing the game because each unit will not have to be ordered twice to move next to an enemy unit and then attack it.

But this behaviour can be a problem at times. For example, a powerful German Panzer division can overrun a smaller American force in mobile mode, but the game alters the unit's formation to attack mode just before combat. This is a minor point and can easily be avoided by keeping on eye on units that get close to enemy positions. ❑

Published by
Brøderbond

UK distributor
Electronic Arts

Systems
IBM PC, Mac

Mad TV

360 minute news

By Brian Walker

Original games, or rather games with original themes, are as rare as earthquakes in Iowa. Why? Conventional wisdom says they don't sell. Users *want* to go to ye olde shop, get kitted out with the gear of yore, and then go and hack off a few heads. Similarly, strategists rarely want to know about anything that doesn't involve some sort of combat.

Occasionally, a game pops up which turns these cliches on their heads – **Railroad Tycoon** and **Sim City** are the most obvious examples that spring to mind. But the fact these games were *so* different from anything seen before also allows them to be ghetto-ized; they are mere abberations that cannot be allowed to alter the mainstream flow.

None of this augurs well for the commercial success of **Mad TV**. Here is a game with strikingly original subject matter, considerable humour, and a fairly stiff challenge. Its success, or otherwise, should throw some light on the extent of consumer conservatism as perceived by marketing departments.

Mad TV takes as its subject matter the ratings war – that ever-mad scramble for viewers, and, as a consequence thereof, ads. It describes itself as a 'business and commerce' simulation and indeed perhaps it is, but let's forget that for the moment.

The player's job as controller of the eponymous company, is not only to achieve the highest ratings for the programs, but also to ensure that the network has some programs that it can show.

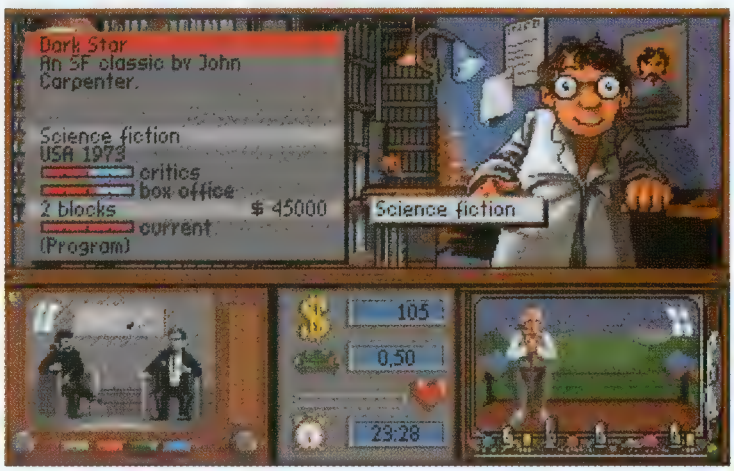
At the start the cupboard is bare, save for a few cultural programs of the kind seen on Channel Four and PBS – not the stuff of which media empires are built.

Fish and scripts

Additional programs can be rented from an agency, or created from scratch by visiting the script shop. This rather fishy looking agency is somewhat more cultured than one might imagine; Fellini's *La Strada* and John Carpenter's *Dark Star* are both available for hire, indicating the presence of a film buff among the design team. The films themselves are rated according to genre, topicality, and critical acclaim. Purchasing these, like most actions in the game, is simply a matter of clicking on the cassettes and depositing them in a briefcase.

In-house productions are a more complicated affair; after the initial script has been purchased, a production 'shopping list' must be acquired. As well as props, actors and 'guests' must be hired to appear on the smarmy talk shows. A studio big enough to house the production must also be found.

How long the before the project comes to fruition depends on the scale of the project. Eventually the would-be masterpiece is deposited in the archives ready for screening. The advantages of such productions, apart from being cheaper than buying in movies, is that they may be resold for much needed cash.



Fortunately **Mad TV** is not quite mad enough to believe in 24-hour television; the network comes on the air at 6pm and close down at 1am. News is broadcast on the hour automatically – it's up to the player to ensure this is kept up to date by visiting the news studio and acquiring the latest stories.

The cash-inducing ad contracts are obtained from an agency. The conditions on the contract must be adhered to upon sufferance of a cash penalty. For example, if a contract stipulates that the ad is not to be shown opposite a horror movie, it would be inadvisable to schedule it against *The Exorcist*; similarly the 'moral majority' (so beloved of this magazine) would get upset if this movie was shown at a 'family' hour.

Most ads stipulate a minimum audience guarantee so astute scheduling is important here. Programs are allocated to a slot by clicking on a 'tile' and dragging it over to the appropriate board (a mouse is essential).

Obtaining programs involves quite a bit of to-ing and fro-ing around the premises of Mad TV, and as the game occurs in real time this can be quite a scramble. Only the experienced player will want to move up from the 'slow' speed setting. Progress can be monitored by watching the reactions of the Gardener family (a sorry bunch of couch potatoes) and also by checking the ratings charts provided.

The actual victory conditions involve neither ratings nor cash, but instead offer the remarkably sexist premise of achieving enough of both to buy presents for the company floozie, Betty Botterblom, who after acquiring enough of a chunk of the material world will then offer the player the matrimonial bed (especially interesting if the player is a woman). This is as every bit as daft as it sounds and looks as though it has escaped from another game altogether. A simple cash or ratings target would have been preferable.

TV or not TV

The breathless atmosphere of a low-rent TV company is well captured in the game. The cartoon graphics are outstanding in this respect as are the descriptions of the programmes themselves.

Allowing players to stage their own productions is a great idea and provides a definite sense of achievement when they are shown (so what if nobody watches them?).

The real-time nature of **Mad TV** precludes a multi-player option, though with a little tweaking this could have been a great modem game.

Apart from the ending the most negative aspect of the game is the manual (translated from German). Poorly printed on cheap newsprint it describes only what happens in the game, not how to actually do anything.

What information there is is badly structured requiring much cross referencing when all that was needed was a summary card listing specific actions. In a real-time game this is especially appalling and has one hitting the pause button more often than should have been necessary.

I'd recommend a couple of 'pilot shows' just trying things out and seeing how things work before playing in earnest. The play value of the game in terms of hours is difficult to gauge and the manual offers no clue as to how long a successful game might take, or whether one can be summarily dismissed if the ratings plummet.

In essence **Mad TV** is fun, the commercial and business aspects of the game are quickly forgotten as the player becomes engrossed in the subject matter and simply tries to keep pace – it is not for players who like the calm and cerebral luxury of turn-based games.

Anyone looking for a game that is fast moving, original, and challenging, should tune in and turn on to **Mad TV**. There's really no need to drop out! ❑

Designed by
Ralph Stock and Stefan Hoffmann

Published by
Rainbow Arts

Systems
IBM PC, Amiga

PC graphics
256-colour VGA, EGA

Supports
Ablib, Sound Blaster, Rainbow Arts Soundman; mouse and keyboard

Notes
The PC installation program on this review copy did not work. If the same problem is experienced, copy the program disk onto the hard disk using standard DOS commands, making sure that the Source1 and Source2 files have been decompressed. If they have not, then type these filenames from the MADTV directory adding the .EXE extension.

TV Guide (or things the manual doesn't tell you)

When visiting the Mad TV studio, place the cassette of your production on the lower right of the screen, not on the main desk as the manual states, otherwise nothing will happen. After doing this ask the producer for a shopping list. When this pops up, left click on the icon and then click on the briefcase. Thanks to the inconsistency of the interface the list will not actually appear in the briefcase, but it should be there. Clicking anywhere else can result in the list not being recognized at the supermarket.

Present and incorrect

When you get to the supermarket and ask Junk for some supplies he'll ask you what you want; 'presents or *dreh bedar*'. The latter is German for 'shopping list' and was overlooked in the translation.

Make sure that before you buy a script requiring a large production studio that you actually have such a studio in your possession. Studio vacancies are rare, which means you could fork out a bundle for a script and have nowhere to produce it.

Money maker

If you want to ask the boss for more money, then go to his office, click on the lower box and scroll with the arrows. This is also used to quit the game.

The presence of terrorists and customs officers will be indicated in the news broadcasts. Use these people to help empty studios.

Fort Apache

How the west was fun

By John Harrington

'Have you ever wanted to tie a yellow hanky around your neck, wear trousers with a wide stripe down their sides, command a troop of "always on time" United States cavalry troopers?' asks the introduction to **Fort Apache**. Not since the age of about seven, I reply, when I realized John Wayne wore a toupee, which seemed to take all the fun out of it for those Injuns fond of a good scalping.

That's the trouble with the Wild West – our impressions of it are coloured by gung-ho movies. This game wisely tries to emulate the film genre rather than the somewhat less than heroic reality. However, we are in the post *Dances With Wolves* era, so the aim of the cavalry in this game is to keep the peace rather than its more traditional practice of genocide.

As commander of **Fort Apache**, a mythical fortress near the Mexican border, the player is faced with the task of marshalling his meagre forces of 45 raw recruits to see off outlaws and Mexican bandits (the legendary Taco Banditos) who are always on the look-out to rob the stagecoach, wagon train or railroad when they are not busy attacking homesteaders, slaughtering the women and raping the livestock. As an added complication gold prospectors must be kept out of the local mountains, which are sacred to the Indians, otherwise an Indian war will break out.

Anyone familiar with Impressions' previous offerings, such as **Rorke's Drift**, will recognize the interface used on this game. The bulk of the screen is taken up with a window which details the action in one of two modes: close-up or map overview.

Down the right is a bewildering panel of icons, some of which would have tested the eyesight of Davy Crockett himself. These icons are used to give orders, which boil down to movement and combat instructions, to individual troopers. They are also used to review each trooper's combat ratings, his experience level and general state of health.

On patrol

Anyone who complained of the necessity in **Rorke's Drift** to give orders to every soldier individually will be pleased to know that **Fort Apache** enables the commander to assign troopers to patrols and then to give orders to each patrol as a unit. This saves time, particularly with the movement orders, but I recommend that when battle is enjoined (as it invariably will be every day) control should be switched back to individual troopers, otherwise the cavalry will perform more like the Doris Biggins Formation Dancing Team than a ruthless fighting machine.

The primary aim of the game is survival. If the captain (the commanding officer) dies, the game ends. Otherwise the game ends after 365 turns. The captain's performance is rated according to a number of things but mainly how many of his raw recruits he turns into experienced troopers and subsequently sends back to HQ at Fort Dix.

Troopers gain experience by winning fights with the baddies and this leads to a general improvement in their combat skills. Consequently there is a difficult decision to be made, as mucho victory points can be earned by releasing the best fighters. Experienced troopers are replaced by yet more raw recruits, but at least this gives the opportunity for more, ahem, career development. But points are lost for losing men, and raw recruits are more likely to snuff it than combat veterans.

This game rates as an introductory wargame. Combat is resolved by comparing the attacker's attack ratings against the defender's defence ratings. Other factors taken into account include the suitability of the weapon being used (the sabre is better for close fighting), whether one side is outnumbered or on horseback and rudimentary terrain modifiers.

Comic cuts

The slightly simplistic atmosphere of the game is emphasized by the cartoon-like graphics and also the historical supplement, which reads as if lifted from a sixteen-year-old schoolboy's history essay.

The interface has been improved from previous games in the series but remains very fiddly.

Most annoying of all is the feature that briefly transfers the viewing window to the scene of an outbreak of fighting before jumping back to the previous scene of, for instance, a cavalry patrol inspecting cacti. Valuable time is then wasted scrolling around the map trying to find the grid reference where the fighting is taking place.

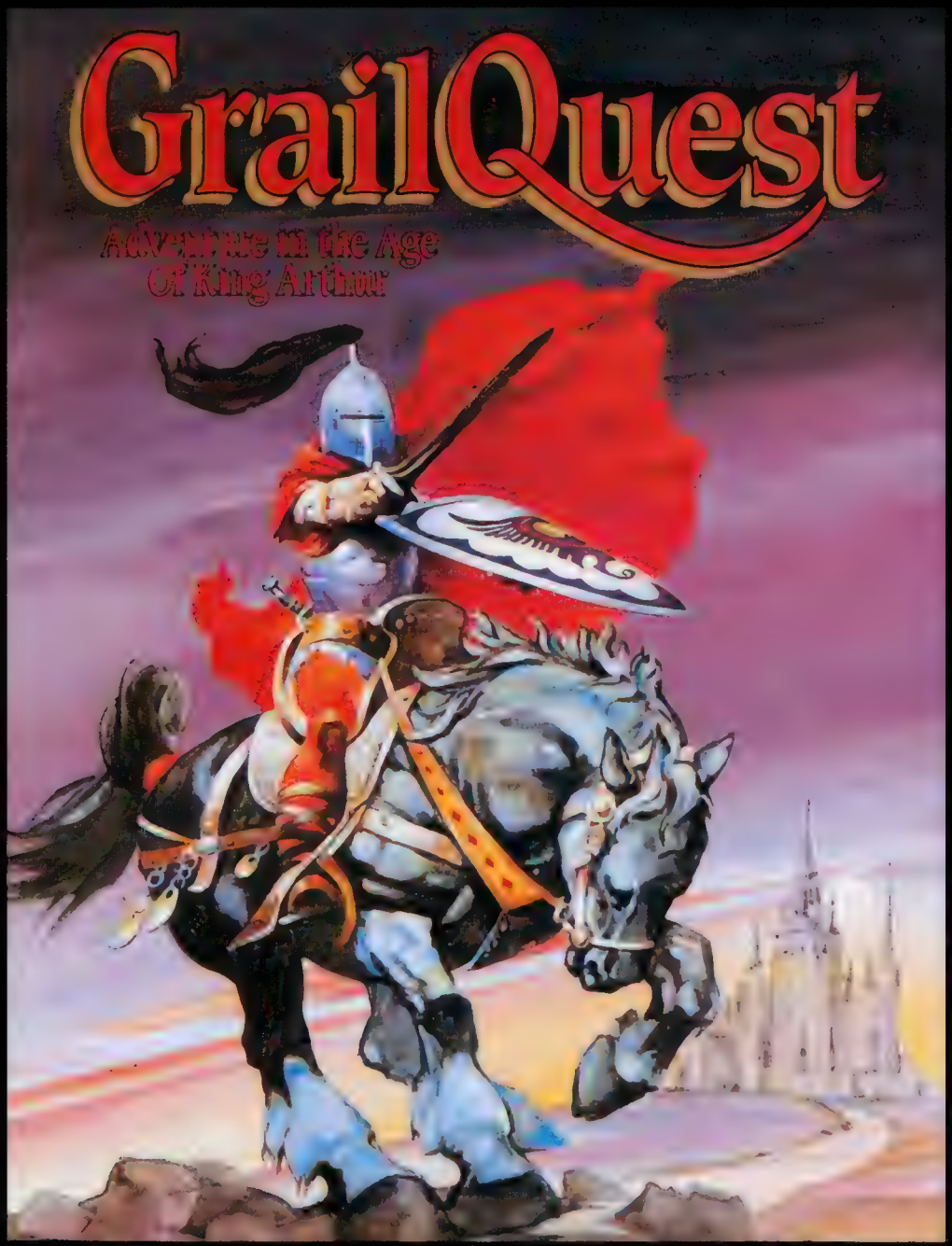
Ease of play could have been vastly improved by having more zoom modes and more keyboard entry. It is ridiculous to have to click the mouse button 44 times to scroll through from trooper number 1 to trooper 45. Furthermore the game could have made more of the role-playing element by allowing each trooper to be named.

As it is I recommend anyone interested in playing cowboys and Indians to go over the park and crawl around in the undergrowth like I did when I was a kid. It's cheaper – except for the laundry bills. ❑

Designed by
Edward Grabowski

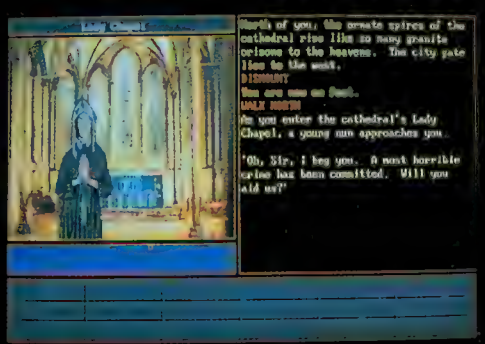
Published by
Impressions

Systems
ST and Amiga; IBM PC due soon



GRAILQUEST Brings the legendary world of **King Arthur** to life with superb 256 color VGA digitized graphics, lifelike sound effects, and a remarkably literate story line. It offers hours of quality entertainment for those who enjoy adventure games with adult situations and sensibilities. On the surface, **GRAILQUEST** is a challenging adventure that is a delight to play. But dig a little deeper, and you'll find more. Based on original source material such as **Geoffrey of Monmouth's History of the Kings of Britain** and **Sir Thomas Malory's Le Morte D'Arthur, GRAILQUEST** appeals to game players who long for more literate prose, and more compelling game play. Add to that an elegant "point and shoot" interface that is a model of simplicity and clarity, and you end up with an intelligent, fun and flat-out beautiful adventure game. The most daunting quest ever begun awaits you, as King Arthur's Knight. Are you worthy?

GrailQuest - IBM VGA



GrailQuest - IBM EGA

Artworx

Artworx Software Co. Inc
1844 Penfield Rd
Penfield, NY 14526
Tel: 800 828 6573
IBM: EGA or VGA graphics card and color monitor. Hard disk required.
Macintosh: 800K Disk Drive

THE PACIFIC ISLANDS: TEAM YANKEE 2

It's sometimes difficult to know what to do when a game is successful. Do you use the basic techniques and mould them into a different style of product; do you produce mission discs; or do you produce a sequel? Or perhaps you just go off and do something completely different.

In the case of **Team Yankee**, a tank strategy-simulation which we launched last year, we reviewed all four options. The game has been very successful on all three major 16-bit formats in Europe, and the mid-year launch in North America has gone rather well.

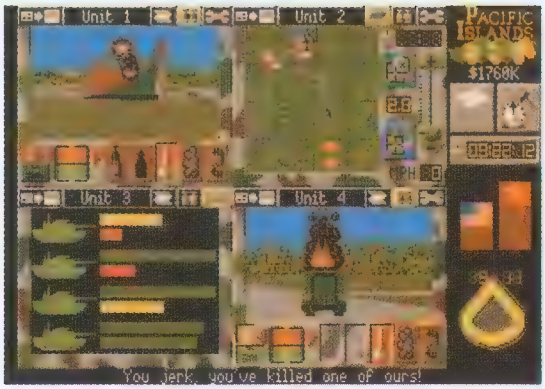
Given these factors, there seemed no better starting point than looking at what had been written about the product. We assembled all of the reviews from both sides of the Atlantic and added some of the very large mailbag which the game has generated. It was clear that most people approved of the basic way in which we presented the original game.

For anyone who doesn't know the product, it allows the player to control four separate tank platoons simultaneously in real time using an icon-based system. The battle environment is created using a blend of vector and bit-mapped images. Although the major control screens in the game look rather daunting to begin with, it was clear that virtually everybody found them very easy to use after a little practice. Even our sternest critic, who reviewed the product in an American magazine, agreed with that.

Young at heart

It made me feel young again to hear the tone of the script which I had written for the game described as 'gushy and adolescent'! Interestingly enough, the most gushing part of the mailbag we have received has come from American game players. One ex tank-commander called **Team Yankee** 'by far the best product he has ever played'.

The rule of hardened game designers must always be to take the rough with the smooth, the hyperbole with the harangue, and to accept criticism willingly. I hope that's what we've done.



Design notes by David Pringle

So, we pieced together all of the comments made on the original product. That incorporated the many suggestions that we had written down as we created the game, but didn't include in the final product owing to lack of time, space, energy and so on. Yes, it really is worth hoarding all of those bits of paper that are generated while writing a game – not for posterity and the Smithsonian Institution, but just in case something needs to be done to the product in the future.

All in order

We then had a series of ideas meetings earlier in the year where we put everything on the table and decided what to do. Our conclusion was that a sequel, rather than just a mission disk, was very much in order. Many players who wrote in just wanted lots more battle scenarios, but it was clear that we could make improvements to the overall game structure to create a product with more depth.

We slowly created a very thorough design spec for the new game. All criticisms and ideas were debated and analyzed for feasibility of implementation. At the end of the day, though, we ended up creating the sequel that we felt happiest with, rather than making it a mish-mash of the average critical rating of the original product's features.

There was a surprising degree of unanimity between us all. The most heated debate actually surrounded the name of the sequel, which transformed itself from **Team Yankee 2** (no prizes for originality) to **Pacific Islands**.

The other major piece of assembly was the actual team to create the sequel. This was a real problem, as two of the game's original designers (Steven Green and Kevin Ayre) had gone off to form their own software house (The Mystery Machine), and I had 'left' the games industry altogether for the more soothing pastures of academia. Luckily, we all found ourselves able to commit ourselves to the project by a mixture of good luck and enthusiasm.

The changes to the game encompass both the cosmetic and the complex, but it still remains a real-time tank simulator at heart. The aim of **Pacific Islands** is to recapture a series of islands in the Pacific (oddly enough!). This involves 30 to 40 different tank battles where the player has a degree of choice about the order of battle areas to attack.

The campaign is funded according to the success of these tank battles. Swift, 'clean' battles are rewarded, whereas the player who conducts a dirty war (blowing up native hospitals or gratuitously destroying property) is financially penalized. All tanks, weapons, repairs, and even leisure time, have to be purchased between scenarios.

The battles are more complex than those in **Team Yankee;** each one has a number of objectives and sub-objectives. An unwritten objective in every battle area is to destroy the opponent's communication facilities (radar towers, satellite stations and so on). The more successful a player is in this respect, the less information the opponent will have about the player's location and strength.

Apart from these major differences, on the surface **Pacific Islands** looks similar to **Team Yankee**. We've created some new icons to make the game control easier. The 3D routines have been perked up. There are lots of new types of buildings and vegetation, all of which can now be blown up with varying effects. The player can now lay mines in strategic positions. There is proper line of sight, which means that it's possible to hide behind blown-up buildings and pick off the opposition. And the strategy controlling the opponents is rather more sophisticated and intelligent.

The current status of the project (early November) is that the code has been written and fairly exhaustively tested for bugs. That leaves the lion's share of the remaining work with me because I'm designing the scenarios. There are about another 15 scenarios to design, and so far it's been great fun. The game is working out even better than we'd hoped. So, I'm off to bed with my book called *Jungle Warfare*. You'll see the game in the shops early in the New Year, assuming that I don't get ambushed in the meantime. ❑

The Pacific Islands: Team Yankee 2 will be published in the first quarter of 1992 by Empire Strategy in the UK and by Readysoft in North America

THE READERS SPEAK THE EDITOR LISTENS

Results of the Strategy Plus readers' survey

The following is a condensed version of the results of the readers' survey in issue 9. The information has been restricted to topics that relate directly to coverage in the magazine. Anyone wishing a full report may obtain one on request (no SAE necessary). Apologies for the somewhat late publication of this, but the high response took a considerable time to compile.

Machine ownership

IBM PC	48%
Amiga	38.9%
Atari ST	20.9%
Other	1.2%

Some 33.5% of readers are interested in the Commodore CDTV; 7.2% are interested in consoles; 21% have modems; 15% plan to buy a PC within the next 12 months; 27.5% would like to see more hardware coverage.

Gaming interests

Strategy	86.8%
Wargames	74.9%
Adventure	48.5%
Flight sims	42%
Sport	24%
Boardgames	21.5%

Which part of the magazine would you like to see expanded?

Adventure	20.4%
Simulations	28.7%
News	44.3%

The responses in the strategy and boardgames sections were too low to measure.

Would you like to see some sort of rating system introduced?

Yes	38.9%
No	56.9%

Do you like the design and layout of the mag?

Yes	91.6%
No	4.8%

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The favourite game of our readers is **Railroad Tycoon**. The least favourite aspect of *Strategy Plus* is the price – at the time the survey came out it was £2.50. Many readers also complained that the mag was 'too thin'. You also thought that the mag could be most improved by using more screen shots. Issue 8 was deemed to be the best yet. The series on *Second Front* received the award of favourite article, closely followed (surprisingly) by the introductory article on PC's.

All change?

Since the survey was compiled considerable changes have taken place within the magazine, some dictated by the survey, others not.

What really threw a spoke in the attempt to meet readers' demands more forcefully was the unexpected signing (just as the survey was being compiled) of a US contract which meant, of course, that *Strategy Plus* would now be catering for an entirely new market. Because the magazine has always had a slight American feel about it, this posed less of a problem for us than it would have for many UK magazines (in fact the editorial you see here is exactly what goes in the US issue – only the ads change). Nevertheless it was a problem.

All aboard!

The first thing, though, was to take on board many of the complaints found in the survey. Accordingly the price reverted to £1.95 and the pagination jumped from 64 to 72, and then 80 pages. More colour and screen shots are being added in accordance with reader's requests.

The sports section was added primarily for the benefit of the US readership where sports games have a high interest level.

The boardgames section just withered away rather than being dumped. The UK boardgames industry as such, has simply disappeared. No professional magazine can afford to cover an industry that has no home base, quite apart from the difficulty of straddling two widely differing industries (one of which is completely unresponsive).

Next issue will see the introduction of a new feature which I hope will excite everybody: The Demo Directory.

For the price of a postage stamp, readers will have access to many of the latest demo disks available in any given month. No more having to buy those crap mags just to cop the disk.

Each month there will be a comprehensive listing of available demos on *all formats*. All you have to do is write in and claim them. For obvious reasons, however, there will be a limited number available, so be sure to get in quick.

A new reader survey will take place within the next couple of months which will also take in the views of the US readership.

Many thanks to all those readers that took the time to contribute to this one. ❑

The Adventures of Willy Beamish

Horny ain't corny

By Joan McKeown

Designed by
Jeff Tunnell

Published by
Dynamix/Sierra On-Line

Systems
IBM PC

PC graphics
256-colour VGA, EGA

Supports
Thunder Board, Pro Audio Spectrum, Adlib, Roland MT-32, LAPC-1 and CM-32L, and Sound Blaster

Boyohboyohboy... if I knew *then* what I know now! This is the hook in Willy's world, and it got me – line and sinker too. Imagine the awesome scams we could have run on our parents and teachers and the bullies on the corner if, when we were nine, we had the wealth of failed pranks now in our memories to guide us. What a concept! What a delightful game.

Hard times

Willy Beamish is nine going on ninety. He has a pet frog named Horny... in honour of future hopes no doubt. Willy and Horny are just due to begin summer vacation as the game opens, with Willy in deep doo doo, as usual.

The first of many immersions in the deep stuff requires Willy to escape from detention and make a mad dash home in hopes of catching the year-end report card before old dad can see it. Why ruin a perfectly planned summer with recriminations? Why take a chance on disrupting the family? Ha!

Home truths

Home is disaster central for poor Willy. Mom's got a case of the terminal yups, Pop's out of a job, and Sis (ye gods, there just had to be a Sis) is the sibling from hell. Oh yes, then there is the baby... life is cruel, but *this* cruel?

Poor Willy is penniless, locked out of his Nintari System, victimized by Sis, worked to the bone by Mom, and serves as a sounding board for Pop.

To add to his troubles, Willy yearns to travel to the Nintari Championships, but that costs big bucks and a lot of exploration. It will also require that Horny be taught to leap on cue and for the gold. How much can a kid handle? All this and a lot more!

Just to keep Willy honest, there is a 'trouble meter' that pops up on the screen and gives an analogue readout of the amount of mischief our hero has been caught at doing. The higher the red stuff climbs, the nearer Willy gets to that most horrid of fates: getting bundled off to a military school. This is the proverbial fate worse than death in this game, and once it happens, Willy's adventures are over. Fortunately, multiple saves are provided. Do mischief and learn.

Disney time

Willy's design team has accomplished something I didn't think possible – a truly interactive animated cartoon. Combining classic Disney type artwork and slick computer graphic overlays, Dynamix has come up with a different and classy look – a look of simplicity that belies the complexity of the techniques and the results. Although I found the menu type dialogue boxes a bit intrusive (and slow), the interface is comfortable and easy to learn.

There is an on-screen help system that is excellent, and more than adequate to make up for any lightness in the manual. While documentation is slim there are lots of goodies in the box including four colourful decals and an offer of a free Willy Beamish watch when you mail the coupon with the warranty card. Good deal.

Estate agent

Arriving as it does, on six high-density 3.5in disks, this game takes up quite a chunk of hard drive real estate. However, it is so much fun dashing around like a kid and getting away with every prank in town, that Willy and company will be welcome to that space for some time to come. ❑

In *The Magic Candle*, 1989's role-playing game of the year, you saved the lands of Deruvia from the foul archdemon Dreax! But that triumph is past!

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Actual photos from IBM/VGA version.

The Magic Candle II

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Reader Service No. 10

Bard's Tale Construction Set

Spelling it out

By Greg Ellsworth

One of the first computer role-playing games I ever played was the original **Bard's Tale**, on an old Apple II. I don't know what happened to the computer, perhaps its components still are in use in other devices, but I still have the game.

That piece of software helped create the hopeless gaming addict I am today, but it nearly destroyed my desire at the same time. I was unacquainted with mapping and keeping good notes, and this game was full of things to really make navigating the dungeons a nightmare. The spinners, areas of darkness and anti-magic zones nearly stopped me from completing the adventure, and I almost swore off all CRPGs in favour of logical text games. I vowed that someday I would inflict the same suffering on another unsuspecting player, should I have the opportunity.

Designed by
Timothy Cain, John Phillip Britt, Greg Christensen

Published by
Interplay

UK distributor
Electronic Arts

Systems
IBM PC

PC graphics
256 colour MCGA/VGA, EGA, CGA and Tandy

Supports
Adlib, Sound Blaster, Roland, Pro Spectrum,

The Bard's Tale Construction Set, or **BTCS**, allows the user to create an entire adventure, employing most of the gadgets that are found in the **Bard's Tale** games. With a good story and some hard work, the aspiring architect can turn his idea into a high quality product that looks and feels like a commercial game.

This set of tools is a powerful means for a creative person or group of people to design one game or a set of connected adventures. By setting guidelines for the magic system, creatures and items, an integrated 'world' can be assembled that allows characters to move from one scenario to another at will.

Linked adventures share certain areas commonly used by the characters in the **Bard's Tale** world – The Adventurer's Guild, Garth's equipment shop, the Review Board as well as taverns and temples. The construction set allows the user to define lists of items, monsters, and magic spells.

Almost anything may be created by giving it a name and outlining its properties. For example, a Mega-Basilisk monster can be defined that is allowed ranged attacks, does 3d20 damage with four attacks a round, hit points of 10d20 and casts flesh to stone every third combat round.

Of the three, only the spell list seems to be limited to 100 entries, and this may be a problem in large worlds where the designer of each module wants many customized spells. A spell's effect is selected from a limited list, but the creator can make it special by modifying its range, target type, damage and so on.

Any item or monster may be given the ability to cast any spell, and the monsters may be programmed to act almost in an intelligent fashion. While users doesn't have unlimited options, with some creative tinkering they can create some very unusual things to put in their world.

The map editor is the key to creating the adventure; the architect is allowed to design any level on a 22 by 22 square grid. Up to 30 special locations may be defined on each level and an entire script language has been created to let the designer completely detail what happens in these areas.

This allows him to create puzzles, change a character's statistics, check for the presence of inventory items, teleport the party and almost anything else imaginable. The difficulty of the random encounters may be determined, and special locations may have more specific battles preset. Levels may then be connected to form the adventure, and adventures connected to a larger 'world'.

Four sets of tiles are included to design the walls and doors of each level, and up to 74 different portraits may be displayed when a monster or special area is encountered. Forty-four pictures, some animated, are included with the set, allowing users to import their own LBM artwork created with Deluxe Paint Enhanced or Deluxe Paint Animator utilities.

Party animals

Although the **BTCS** is a very good design tool, the finished game must be enjoyable and the interface must be easy to use.

The quality of the story and the overall look of the game is dependent on the skills of the designer, but the interface is coded into the game compiler and can't be altered. This part of the construction set is what disappointed me.

The package includes a sample adventure and party, and while the commands are very similar to the ones in the **Bard's Tale** adventures, I found it was rather cumbersome to move around between menus. The manual could have been more detailed, but if the sample adventure files are studied then new information may be gleaned.

The **BTCS** is a versatile game design system that has some room for improvement, Interplay will no doubt listen to the users' suggestions and upgrade the product soon. ❑

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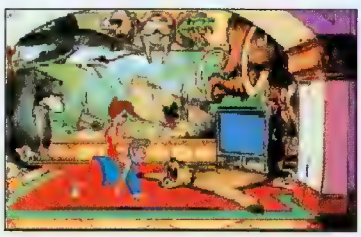

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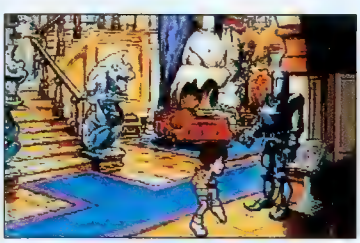

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Police Quest III

Serendipity and Sherlock

By Randy Snow

I always wondered what it would be like to work as a law enforcement official. The occasional traffic ticket, or god forbid, a traffic accident, will usually set my mind spiralling down a path – a path that usually ends up in losing my temper and spurting profanities as I drive ever so slowly away.

This stream of thought also leads me to consider what it would be like if the situation was changed, and *I* was enforcing the law. **Police Quest III** allows such dreamers that very opportunity.

The adventure starts out with the player assuming control of Sgt Sonny Bonds at Lytton police headquarters. Sonny spends quite a bit of time in his car. To alleviate boredom and to help catch the criminals, a few high-tech devices have been incorporated here.

Tracking device

There is a computer that can be used to trace driver licence numbers, and a tracking device that can be used to follow a person or car. Of course, the proper item must be obtained and placed in, or on, the person or vehicle Sonny wishes to follow.

So, with his cuffs, gun, flashlight, nightstick, and notebook in hand, Sonny is ready to hit the streets of Lytton and begin nailing the perps. And sure enough what does he espy in the local park? Why, a loonie in a pair of Y-fronts babbling about aliens. A few whacks with the nightstick sorts that one out. Before anyone has a chance to yell 'police brutality', Sonny's haring down the freeway to put the arm on some harpy who refuses to sign a ticket.

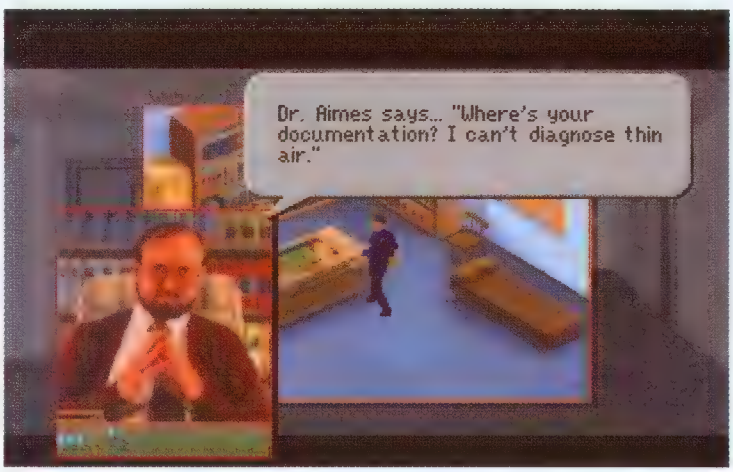
The feel of the game starts to change when Sonny gets a call from the local mall and finds that his wife has been brutally attacked. After this event occurs, Sonny is promoted to homicide and the real dirty work begins. Sonny must investigate his wife's assault, and several other related cases. During the investigation Sonny must question witnesses, obtain evidence, and hopefully discover who is behind all the bizarre and violent crimes. With a lot of luck, and maybe a few hints from the neighbours, Sonny may get enough evidence to convict the killer or killers and save the city of Lytton from these dreaded cult murders.

The game's designer, Jim Wallis, has put much of the experience gained from his work as a police officer into **Police Quest III**. Several things sprung up that I was not expecting at all, but that is the entire point of playing an adventure game. I was immersed me in the passions of the characters and in the increasingly dark plot – so dark that Sierra On-Line has put a label on the outside of the box suggesting that the game is not suitable for younger children.

The detail in **PQ III** is strong meat. For instance, after Sonny is called to the scene of a murder the examination reveals an all too real digitized corpse. When Sonny lifts the man's shirt, bloody markings are revealed, carved in the chest. Sierra claims that the **Police Quest** series is 'so realistic it's used by police departments all across the country as a training tool'.

Don't faint

Police Quest III is a marvellous game, though not for the faint of heart. I would recommend it primarily to experienced adventure game players, but with a bit of help rookies should be able to make it through the night too. ❑



Designed by
Jim Wallis

Published by
Sierra On-Line

Systems
IBM PC

Graphics
VGA, EGA

Supports
Roland, Adlib and Sound Blaster sound boards

Notes
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Reader Service No. 80

MAMA SEZ...

Where's the beef?

It's not who but what you fancy that matters in Hard Nova

Designers have boobed when it comes to sex in role-playing games

Role-playing land has become a place where only wolves may safely gaze. The more dazzling the graphics become, the more busty babes in scanty outfits appear. It's rather depressing for the distaff gamer! Where's the beef? Where, O where, are the handsome princes to be rescued, the John Steedish eyebrows to beckon erstwhile Mrs Peels, the sweat-slicked muscle-bound rowdies to pal around with? They sure aren't in many of the games Mama has played lately.

Mama sez... tits and ass may be fun for the boys but boring for the gals. Mama wants to see some pecs and buns!

Realizing that most games could not adapt to a lot of gender-specific characterizations and still maintain the story, Mama still would like to see some acknowledgement that women form part of the audience for these games. Few of the women attracted to role-playing games are sex-starved voyeurs, but most of us would enjoy equal fantasy opportunities.

Bane of the Cosmic Forge is a case in point. While there is not one portrait of a good looking guy in the entire game – unless you're into daemons – bare boobs abound, bouncing onto the screen with fervent frequency. The Ultimate Bad Girl is a vision of S&M loveliness; the Ultimate Bad Guy is a drip. Sure he is a vampire, but hasn't anyone at Sir-Tech see Frank Langella in the role?

Then there is Larry, the guy with the suit. Mama has vague recollections from a hidden real life of a time when **Leisure Suit Larry** first appeared. Mama had the only VGA display (along with the only 386 system) at work, and put the game on her hard drive at the request of a few of the guys. What a lark that was. There sat Mama, queen of the keyboard, surrounded by a gang of supposedly serious guys, leading them through the game. What a hoot! What a bore!

Having been hit on by better men than Larry, Mama was able to feed the guys the right lines, but longed for a sleazy trip or two on the wild side for herself. Not a chance. In his fifth incarnation, Larry is still the bane of the cosmetic singles, and Mama is still stuck on the mild side.

Gender touch

Hard Nova is one of the few role-playing games that gives the gamer the option to play a male or female lead character. Stark, the male, is my kinda guy and Nova, the female, is a worthy alter ego. The game adjusts to the gender of the character and barroom conversations reflect both sexual and gender specific realities.

My favourite game of all time, **Neuromancer**, is one of the biggest offenders of my gender sensibilities. No part of the game is gender specific, yet the character portrait depicts the biggest dweeb Mama has ever seen. I just hated wandering around in an Elvis haircut and bell-bottom trousers.

Unfortunately, most graphic adventure games show the character interacting with the game world and therefore can not offer alternate genders without a dual set of graphics. This would make the cost of games prohibitive. Too bad.

One game has a hilarious gender-bender sequence. In **The Secret of Monkey Island** the hero, a still wet behind the ears and callow youth, is hit on and seduced by the Mayor. Quite a woman, is the Mayor!

While on the topic of if only's, if only most characters were less asexual. In most games, character gender choice has no effect upon game play. Strategy is rarely gender dependent, and non-player character interactions hardly ever differ according to party gender. Occasionally, female characters can have fewer strength, endurance and might points than male characters. In a very few games, females have greater capacity for intelligence points. Even in these situations, the point differentials rarely affect game play.

Character portraits in most games seem to enhance the lack of gender specificity. Sure, the female characters look like girls, the males look like boys. That is probably my main complaint. Give us some men and women. Give us some sexual tension in the party. Games are not really the sole purview of male adolescents. A large number of gamers are mature adults who have held onto adolescent fantasies, and who have the money to pay for them. Let us give those fantasies a freer range.

Mama is all for continuing the cheesecake, but let's get some beefcake into the pictures too. ❑

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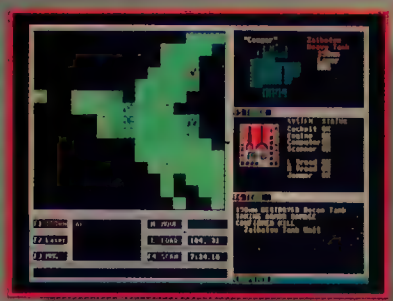

Greg Ellsworth throws a torch on SSI's role-playing adventure Pools of Darkness

ENLIGHTENING EXPERIENCE

Pools of Darkness is the final ding-dong with the evil Lord Bane, who will pull no punches as he tries to retain his hold on the Forgotten Realms. The player can achieve higher levels than ever before, cast 9th level magic spells and 7th level cleric spells, but will face equally powerful opponents.

The party's main goal is to recover three objects of power from Bane's allies, then enter Bane's own realm to defeat a horde of monsters that are sent from the Pool of Death to subjugate the Moonsea region.

Party selection is of the utmost importance. The best characters to choose for the party are human single or dual class, as they are unlimited in level advancement.

At least two of the characters should have clerical abilities, and there should also be two mages with intelligence of 18 to allow them to cast 9th level spells. There are many giant class creatures, so the party would do well to contain at least one Ranger. The healing power of the paladin is very useful if all the clerics are rendered unconscious, as is the added turning ability and cleric spells that are granted to this class. A thief's abilities will allow the party to avoid some conflicts, and the backstab is very handy when used properly.

Taking these things into account, a good party would contain the following: a human paladin; a human cleric; a human ranger; a human ranger/mage, progressing as a magic-user; a human cleric/mage, progressing as a magic-user; a human cleric/thief, progressing as a thief.

With the party assembled, the spellcasters should be placed in the bottom of the order. I found the most useful offensive magic-user spells to be magic missile, fireball, delayed blast fireball, meteor swarm and hold monsters. The best clerical spells were hold person, dispel magic, flame strike, destruction and blade barrier.

The spellcasters should also have enough resist fire, resist cold and protection from evil spells among them for the entire party. The mages should keep fire shield, iron skin and globe of invulnerability in their repertoire for personal protection, and the clerics should have bless, prayer, and healing spells memorized.

A good plan of action would be to penetrate as far as possible into the strongholds of evil forces, gaining experience and magic items along the way. It is often necessary to leave a location to have items identified, to train for new levels and to reorganize the party's strategy once they have some idea what they face.

Thorne's realm

The portal to the cave of the ancient red dragon Thorne is reached by defeating Modthyrth and a dracolich in the dragon's lair. However, in order to get there, the party must first battle through forces of giants in the Steading by Dragonhorn Gap. Next, they must enter a cave of magically twisted passages to find and defeat Ungelow, the fire giant mage.

After this obstacle is removed the player can follow the Dragons to their aerie, where the party will fight many blue, green, white and black dragons to find four keys which allow them to enter the room where they finally fight Modthyrth and his newly created dracolith.

Once passing through the portal, the party must leave all their magic items in Elminster's Limbo vault before continuing to Thorne's realm. As they search his cave, they learn of the gathering of dragons that is being called by Thorne with the Horn of Storms. The characters will find caches of weapons to re-equip themselves, but the longer they search with the thief Raizel for treasure the more dragons will gather for the final battle. The player can make a more thorough search after the final fight is over and the kirin's horn is recovered.

Kalistes' realm

The Drow have taken over Zhentil Keep and are taking people from above to their underground city for their mistress Kalistes. The party should not cause trouble in the keep or they will be bothered by patrols. In the south-east corner of the city they should meet a slave who tells them of the city under Manshoon's Tower and of the halfling Traned.

The tower is entered by a secret passage, then the party can follow the Drow to enter the city. They should enter the slave pens and assist the

Drow elf named Silk, then completely explore the temple where more prisoners are kept and finally destroy Kaliste's portals into the Moonsea region.

Drow weapons and armour will survive passage into Kaliste's dimension, and the party should collect long swords and chain mail from the Drow sorceresses they fight. These are +3 weapons and armour that will help the characters survive while they explore the web dimension.

After passing through this portal, the player will be confronted by the Eyes of Kalistes. This monster is really Silk's cursed sister Cynthia, and the party should free her from Kaliste's control. This realm is almost as large as Moonsea, with several small cities to explore.

The party should try to find a female Drow elf named Denna who will explain about Shest's test and ask you to help her son Hern. Alternatively, the characters may meet an assassin sent to kill Hern. Either character will help them enter the place where the test is held, but the assassin will betray them once inside.

There are many clues to be gained from Drider prisoners and magic items to found in the guard barracks. With the ward of passage gained here, the party can pass in relatively safety around the realm and into Kaliste's parlour to finally battle the Marilith and recover the Crystal Ring.

Moander's realm

The Pool of Darkness that leads to Moander's realm is within Marcus' Tower. The party should first go to the lower level where the city of Phlan has been buried and is under siege. After finding the female fighter-wizard Shal, the characters must proceed all the way to the top of the tower. On about the 8th level, the way back will be blocked, so the party should save the game often.

Destroying the evil works of Marcus as they ascend, the party will find his quarters on the top floor. The servant will say that Marcus and Petra are inspecting the manufactory, and when the player has destroyed all of these they will return here to fight Marcus and his forces.

After his defeat and the Shal/Petra resolution, the party must run to the portal inside the Temple of Transformation as the tower collapses. Once back in Elminster's camp the characters may enter Moander's realm or visit the now free Phlan. Moander's dimension is actually the slumbering god himself, felled by a gigantic elven arrow.

The party must once re-equip itself with items it finds here before seeking Tanetal in the heart of Moander. There are important encounters that should be found in various parts of the sleeping giant. In his ear, the party exterminates Bits 'O Moander and the hermit that lives there gives them magic items and tells them about Aeghwaet. Inside a wound located in the left arm, the characters fight more monsters and meet Aeghwaet who gives them two potions necessary to move around inside the heart.

The party rescues a princess in the hair to find a vial of amphora which can be used in Moander's mouth to slow his heartbeat. The Cult of Moander is found near the right foot, and the characters find more magic items after defeating cultists. If the player battles mages in the brain, it can tap into the sleeping god's thoughts.

With the amphora cast into Moander's mouth and the two potions given to them by Aeghwaet, the party is ready to enter the heart. There is an elf here named the Watcher who will help the characters at six key locations which a ranger or druid will recognize. The Watcher only appears at each location once, and only when the party completes a necessary step. Finally, he helps them flush Tanetal out of the right ventricle for a final battle and then the party finds the Talisman of Bane.

Bane's realm

The black city of Mulmaster is ruled by Arcam the Beholder from the caves beneath the area. The party must enter this lair, and the only way to do so is to win battles in the arena. Once granted an audience with Arcam, they will have to fight his mercenary force if they have obtained any of the objects of power.

If they visit Arcam with none of the items, he will divert them by sending them to fight his forces around Moonsea. Each 'quest' will diminish his army, making the final fight in the caves easier, but eventually the party will have to fight then chase the beholder through his caves. Once Arcam is defeated, the characters can reach the portal to Bane's dimension by passing through three rooms with the Horn, Ring, and Talisman. As they enter each room they will battle dragons, spiders, and Bits 'O Moander before finally reaching the Pool of Darkness.

Passing through Limbo, they leave their magic items once again and emerge on the boat dock of Dark Phlan. This is an evil, twisted mirror image of the real city, and the party must stop a wedding between the undead Lord Cadorna and the kidnapped council member Sasha. There are several caches of weapons and armour to be found, and after the battle the player is ready to enter Gothmene's palace in west Phlan.

The palace may be explored to gain more magic items, and the party will encounter tricksters who will attempt to find out where Elminster is so that Gothmenes can capture him. Finally, the party overhears the Balor talking to his beholder attendant Xoham. Gothmenes starts the Tantalus clock and leaves to search for Elminster, and this begins the endgame. The characters cannot leave now, and must use the Crystal Ring to retrieve Bane's Crystal from the Pool of Death.

A few minutes after gaining the crystal, the Balor returns and the player must fight three very tough battles against all the forces from the three dimensions, Xoham and a force of beholders, and finally Gothmenes himself aided by Bane's minions. This third battle is fought without any magic at all, and if the party survives the game is won and Moonsea is restored to normal with only the characters and Elminster remembering any of the events that occurred from the time the game began! ❑

YOUNGER THAN YESTERDAY

Chris Crawford rolls back the years to look at the history of computer games. Part one: 1k and rising

Well, children, gather round ole Grampa Crawford and listen while he tells you about the good old days of computer games. Yep, it was back in the 1970s that I got my start, back when there were cowboys and injuns and BASIC. Yessiree, those were the days, when men were men and programs were in machine language.

Games were around right from the beginning, though. Of course, back in those days, games on computers were much simpler than they are today. They were more like cute little demonstrations of what the computer could do, or programming exercises for the beginner. Maybe that's one reason why games today are still treated like some kind of sleazy programming. Either way, they were pretty simple.

The first personal computers were of two types: the single-board computers and the S100 machines. They all had maybe 1k of RAM Q; most of them had a few hundred bytes of bootstrap ROM to load up some simple operating system; I/O consisted of a keypad or bank of switches and some LEDs.

All this was around 1976 and 1977. Now, you might wonder how we managed to write games on those machines. Well, it took some imagination. Take the KIM-1, for example (ptooey). That durn KIM-1 had only six seven-segment LEDs and a 21-key keypad. But people were still able to write games for it.

Hmm... it's very nice, but will it run Wing Commander?

There was **Lunar Lander**, for example, one of the simplest games. The player had to land his lunar module on the moon while the module was falling vertically. The burn rate of the rocket also had to be controlled. It was a first-order differential equation, nothing more, but it sure did impress people. There was a readout of position (two digits), velocity (two digits), fuel supply (one digit), and burn rate (one digit). As Spock used to say, 'Simple but effective.'

Sweet charity

We had other games, too: **Hunt the Wumpus**, **Blackjack**, **Farmer Brown**, **Hangman**, **Shooting Stars**, and so forth. **Farmer Brown** was what might be called a skill and action game, if you were charitably inclined. There were six little patterns representing an ant, a bird, a cow, a dog, an elephant, and a fox. The program would try to run one of these patterns across the LED display. You had to recognize which one it was and call out its name (by pressing the appropriate key from the keypad) to scare it away before it made it to the opposite side of the display. I suppose it's not as exciting as **Their Finest Hour**, but it sure beat shucking corn on a Saturday night. I suppose you young 'uns would think these games were pretty dumb, but we thought we were pretty smart cooking them up. I mean, just getting anything working at all was quite a challenge back in those days.

But things were changing fast. In 1977 we had three new computers that showed the future. They were the Radio Shack TRS-80, the Commodore PET, and the Apple II. There were lots of other computers, but they never got anywhere. The TRS-80, the PET, and the Apple were the winners.

What was remarkable about these computers was that they were appliances. I mean, before them, you had to be pretty good with a soldering iron to own a computer. You had to build it from pieces. These guys were selling the complete package for under $1000! It was great! I mean, these babies were loaded. They had an operating system and ROMs with BASIC built in, their own CRT displays, a ton of RAM (well, at least 4k of it), and even a built-in tape cassette for saving

programs. Here was the whole shebang. A lot of people don't realize, though, that the Apple got off to a slow start. In the early days the race was between the PET and the TRS-80. The PET had a 6502 while the TRS-80 used a Z80. The Apple was nowhere to be seen; it was too darn expensive to sell. In fact, it wasn't until Visicalc set up in U80 and U81 that the Apple really got going, but that's another story.

These appliance computers spawned the first commercial software. In the earliest days, software was something that you typed into your keypad, maybe from a listing in a magazine or newsletter. But the appliance computers made software a consumer item, and all of a sudden people were writing programs and selling them in stores! Now, don't get me wrong; there were no software publishers or anything like that. If you wrote a program, you duplicated some cassettes, typed up and photocopied a manual, and stuffed the whole thing into a ziplock bag, and then sold it to whoever would take it.

Marketing in those days was a kind of seat-of-the-pants experience. When I did **Tanktics**, my advertising campaign consisted of a full-page ad I placed in a user's group newsletter;; it cost me maybe $50. I went around to computer stores and wargame conventions, showing off my game and selling copies. Most sales, though, came from reviews. There wasn't much software out there in those days, so anything new got a review. I sold 150 copies of **Tanktics** that way. There were other efforts like mine. Somebody in Canada did a neat little game called **Warlords**. Jon Freeman and Jim Connelley started up a company based on their efforts to bring role-playing games to the computer; they called their company Automated Simulations. (It later became Epyx.) Their first game, though, was a tactical space combat game. There was a group in Massachusetts called Personal Software that did a game called **MicroChess** (ptooey). They later did something called **VisiCalc**.

There were no publishers in those days, at least none like today. Programmers had to self-publish their stuff because there wasn't anybody else who would do it for them. Software was sold mostly by mail order directly from the programmer to the user. There were plenty of magazines and newsletters to get the word out, and mail order was the established way to sell. There were some computer stores, of course, but they weren't like the slick chains you see nowadays. They were more like hobby shops run by enthusiasts. They'd sell some hardware and whatever software they could find. The software was normally set up on pegboards, because almost everything was in a ziplock bag.

Opportunity knocks

In 1977–79 I worked for the University, which enabled me to travel all over Northern California. That job gave me an opportunity to visit a lot of computer stores. There was one in every big city, sometimes two. The small towns, though, they didn't have much. Nope, they weren't very common, and every one was the creation of its owner. Some of them liked Apples, and some liked PETs, and some liked S100 machines.

Games were a lot cheaper back then. I sold **Tanktics** for $15, and later on I sold **Legionnaire** for $10. All the games sold for less than $20. Everything was on cassette, and a lot of games were written in BASIC. Piracy wasn't considered to be a problem because nobody expected to make much money off the software in the first place, and besides, copying a cassette tape with programs on it was tricky, especially when tapes seldom worked in the first place. Humph!

Sound thoughts

Graphics and sound weren't much to write home about. The PET and the TRS-80 both had black-and-white text-only displays. The PET had 24 lines by 40 characters; the TRS-80 had 16 lines by 64 characters, as I recall. Graphics were obtained by writing characters to the screen, and each machine had, in addition to the regular ASCII character set, a set of special graphics characters.

Beware of the fog: the Commodore Pet

The big graphics extravaganza in those days was a game for the TRS-80 called **Android Nim**. It was just nim, but it sported rows of little animated robots. These guys actually moved around while the game was played game! They'd move their heads back and forth and roll their eyes and open and close their mouths, all while they were waiting for you to make your move. It was pretty sensational stuff. I was jealous that **Android Nim** got all the press attention, while my games, which were much deeper but not as flashy on the graphics, didn't get as much coverage. It just goes to show that some things never change.

That's the way things stood as the 1980s dawned on us. Funny thing, I can't recall many people who had actually published anything in the 1970s who are still with us. Besides me, there's Old Man Freeman and there's Jim Connelley, too, but that's about it. All these other young whippersnappers didn't get into the act until the 1980s. I suppose there ain't many geezers like me left (ptooey!). ❑

Next month: The Atari years.

PREVIEWS

Fate: Gates of Dawn

THE CONCEPT of being transposed to another world, or even another dimension, is one that is a staple of the adventure and role-playing genre, and certainly **Fate: Gates of Dawn** from Rainbow Arts is not going to break any new barriers.

An omnipresent sorcerer has cast a spell on a hapless individual resulting in some serious culture shock.

Inevitably there are a few companions on hand to help discover the reasons for this mysterious abduction.

So what's new about the game? Rainbow Arts would answer: 'Four different cities with up to seven levels, and 12 different dungeons each with up to 10 000 rooms.

'There are more than 500 intelligent opponents with their own personalities.

'Each of the characters behaves differently so they have to be treated like real people. The way the story is resolved depends on the player's actions, so there are multiple endings.'

Fate: The Gates of Dawn is aimed at experienced role-players. It will be available on all formats in the first quarter of next year. The PC version will support expanded memory.

Another World

ANOTHER day, another game – **Another World**, in fact. This is the title of the latest game from Delphine software and its resident genius, Eric Chahi.

It was Mon Chahi, you may recall, who was responsible for the fiendishly difficult **Future Wars**. The past two years have been spent developing a brand new animation system using polygon graphics, rather than the traditional bitmaps.

Certainly the movement in the game has a very fluid feel to it, which makes for a cinematic (that word again) rather than software experience. Adding to this sensation are the numerous special effects such as zoom, panorama, and animated close-up shots.

The story concerns the misadventures of a young nuclear scientist whose experiment went wrong (serves him jolly well right), destroying his lab and, for no apparent reason, catapulting him into another world. All that's known so far is that the brilliant young scientist finds that himself in the nick with a strange hairy creature that bears a startling resemblance to boxing promoter Don King.

Another World will be released in the UK by US Gold and in the US by Interplay (which has retitled the game **Out of this World**). Expect to see this in January on the PC, Amiga and ST. ❑

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PROS AND CONS OF '91

Phillip Murphy

Pros: The collapse of the USSR and the consequential heightening of the sales of the boardgame **Kremlin**. The tumbling prices of PCs. The emergence of a small, four-man, Amiga-only software house called Team 17. I'm a hardened PC S&T man, only ever tempted away by **Prince of Persia**, **Wing Commander**, **Gunship** (and **2000**) and the odd adventure. Team 17's second game, **Alien Breed**. **Midwinter II**, **Lemmings**, **Geisha**, and the boardgames **Pony Express** and **Vendetta**.

Cons: The collapse of the USSR (from which we received Boris Yeltsin and no peace dividend). The sales of Gulf war games and scenarios. The IBM/Apple cartel. The people who keep telling us that the biggest leisure computer in Europe (the Amiga) in terms of user base, units being sold, and software sold for, is dead. **UMS II**; The Big Box Syndrome; Games Workshop.

John Scott

Pro: Starting the year with a new job, doing work which I love and which is important to me.

Con: Learning to try to live on less than 20% of what I used to earn (which wasn't much)!

Pro: Finally, after years of blood sweat and tears, playing Mirrorsoft's **Rocket Ranger** through to the end.

Con: Having to use a hardware cheat (Action Replay Mk III) to do it.

Pro: Getting to review a few wonderful games for *Strategy Plus*.

Con: Having to review a lot of utter crap for *Strategy Plus*.

Pro: The arrival of some games of unrivalled excellence in sound, graphics, and artificial intelligence.

Con: The fact that one needs a HAL 9000, or a Cray Supercomputer, or something else with a brain the size of a planet to play them.

Joseph McCullough

Pros: PCs continue to drop in price and rise in power; sound card and 256-colour VGA support becoming a must for all new PC releases; sports simulations grow up – third-generation baseball and American football games are released to the cheers of sports fans everywhere; Sierra releases **King's Quest V** on CD-ROM, to break new ground in game technology; Origin's **Wing Commander II** pushing the envelope of PC performance; multimedia PC (MPC) standard agreed by Microsoft and other industry giants, paving the way for more advances in technology directly related to game development; Micro Sports **NFL Pro League Football** proving that modem play can be implemented successfully in sports simulations.

Cons: Promise of low-cost CD ROM drives not bearing fruit – CD ROM drives are still too expensive and too slow to be used in game applications. **Earl Weaver Baseball II**, the dog of the year, with graphics that demonstrate how bad MCGA can be; the conspicuous absence of basketball simulations. PC dominance which threatens to freeze out other computer platforms, leaving Amiga owners wondering whether new PC games will *ever* be ported over to their beloved machines.

Strategy Plus writers try very hard to recall 1991

Randy Snow

Pros: **Martian Dreams**; **Wing Commander II**; writing for *Strategy Plus*; **Police Quest III**; **Willy Beamish**; **Bard's Tale Construction Set**; **Might & Magic III**; remake of **Space Quest I**; **Space Quest IV**; **Eye of the Beholder**; The Sierra Network; a nice cold beer; Brian Walker's English humour; Sega Genesis; tall blondes; not living in a cornfield with lights as Brian Walker likes to imagine; the new 486/50 CPU.

Cons: Traffic tickets (*in a cornfield? – Ed*); **Castles**; Brian Walker's English humour; too many nice cold beers; unemployment; AIDS; the Gulf war.

Joan McKeown

Pros: **Bane of the Cosmic Forge**, **Hard Nova**, **Might and Magic III**, and my first look at Mama Sez in *Strategy Plus* Issue 10.

Cons: **BAT**; **Castles**; and my first look at the Mama illustration in *Strategy Plus* Issue 11.

Steve Wartofsky

Pros: **Gunship 2000**; IBM 486; **UMS II**; **Tony La Russa's Ultimate Baseball**; **Micro League Football**; **Jetfighter 2**; United Parcel Service; **Amnios**; meeting our Glorious Editor at June CES; joining up with *Strategy Plus* (thanks, guys!); **ATP**; **Great Britain Scenery** for **Flight Simulator**; **Scenery Disk 12**; **Wing Commander II**; **Megafortress**; **Western Front**; beta-testing **Falcon 3.0**; watching the hype fail, be it games advertising or political prognosticating or economic soothsaying; getting through my physical check-up without being thrown cheerfully onto the operating table by accident or to make money for the doctor's new set of golf clubs; learning to like Lake Michigan, despite the fact that it does not, and never will, look like the ocean.

Cons: Having to tell the unpleasant truth about Matthew Stibbe's **'Nam**; **Strike II**; **Earl Weaver II**; installing **Wing Commander II**; **Millennium** on the PC (what a cheat); the US Postal Service (I have numbers from the newspaper to back this up); games taking up more than 6Mb of my hard disk; Clive Barker's latest stuff; hearing the pundits explain US foreign policy by saying, `they're insane and irrational, that's why we're doing what we're doing' one too many times; becoming almost convinced that, indeed, our species may only have a few more decades at most left on this planet and in the light of this – waiting for **SWOTL**; waiting for **FALCON 3.0**; waiting for **Commissioner's Disk II**; waiting for Godot and wondering whether they'll all show up in time.

Greg Ellsworth

Pros: **Spellcasting 201**; **Timequest**; **Pools of Darkness**; **Warlords** (enhanced version); **Martian Dreams**; longer and more involved text adventures and CRPGS; more use of high-resolution VGA/MCGA graphics.

Cons: Rushed game releases which result in bugs; Sierra's new icon-based interface – it makes games *too* easy; games companies which still advertise new games in magazines months before actual release; inadequate manuals and documentation that require README files on disk to explain 'last-minute' changes.

Paul Rigby

Pros: **Wing Commander** mission disks; the rise of the PC as a games machine; my Hewlett Packard Deskjet 500 [sigh]; **Megafortress**; the Flightstick joystick (well I only found

it in 1991 although it's been around a while in the States); Legend – for keeping the text adventure home fires burning; Dynamix's Jerry Luttrell – a PR man who is, amazingly, one of the few who can actually do his job properly; Bob Sidwick of RC Simulations – a flight enthusiast to the core; Origin – for pushing back the envelope and not giving a damn.

Cons: Liverpool's defence; **Chuck Yeager's Air Combat** – what a waste of a licence; D&H Games for some of the most pathetic sports simulations I have ever seen; Micro Sports for neglecting solitaire manager play in **NFL Pro League Football**; yet another bloody Gold Box RPG clone from SSI; the UK's September ECES; Amstrad for yet again cocking up the 'PC games machine'; consoles; European software houses, which with one or two exceptions continue to maintain a high degree of incompetence.

Brian Walker

Pros: Strategy Plus writers without whom...; Mindscape, Empire Strategy, Storm Computers, US Gold and all the other UK software houses that supported the mag when we didn't have a pot to pee in; the resurgence of strategy games; **The Perfect General**, **The Lost Admiral**, **Sim Ant**; Compuserve; *Strategy Plus* launching in the US market; letters from Nigeria; This Womans Work – Kate Bush.

Cons: Blackpool getting to the playoffs and then failing to win promotion; Philip Murphy's shirts; the dearth of good UK sports games; voice mail; the Gulf war and the sims thereof; inadequately tested games being released prematurely resulting in much user frustration; PR people that don't know a disk drive from a donut.

Ian Marsh

Pros: **Eye of the Beholder**, **Prince of Persia**, getting engaged, completing the **Time Lord** role-playing game, Steve Meretzky's fertile (well manured, that is) brain, strawberry scented underwear, Bouncing Bob Maxwell's impersonation of Jacques Cousteau without an aqualung.

Cons: **Bill & Ted's Execrable Adventure**; dare I say **Castles**; wedding preparations; Compuserve bills; Gulf war games; Doctor Who being off the air for two years; Bryan bloody Adams. ❑

Industry voices

Chris Crawford

Pros: The rapid recovery from the recession. The recession that hit America and Britain triggered a very bad Christmas for games. Everybody suffered weak sales in 1990, and it looked as if the industry were about to take a bad fall. But 1991 has turned out to be better than we feared. Most games companies tightened their belts and made it through the recession. We can all breathe a sigh of relief, and early indications are that Christmas 1991 will be good for games sales.

Cons: The continuing capitalization of game development. By this I mean the trend towards games as a soulless group production, created and fostered by lots of development money and little in the way of true artistic talent. 1991 saw a number of games whose success was based more on development budget than creative effort. Publishers are trying to buy market share. In 1991, that strategy worked famously. My fear is that the trend will continue until the industry experiences some sort of budgetary collapse.

Gregor Whiley

SSG

Pros: The incredible popularity and runaway success of **Warlords**: getting feedback from the large number of customers who wrote in to congratulate us about **Warlords** and offer their suggestions for the future: finally getting **Halls of Montezuma** onto the Amiga which generated approval and relief from out patient Amiga users: being able to work on a true 16-bit version of **Carriers at War**, one of SSG's all time best game designs. The colour, clarity, and luxurious space for game design we get in **Carriers at War** by using high resolution VGA graphics: the general resurgence of the war/strategy market in defiance of predictions of its death: Apple's resurrection of the word's 'game' and 'entertainment' for official Applespeak, after years as unwords.

Cons: The continuing near invisibility of our Mac games, even though we are coming up to our seventh Mac release: Commodore's incubate it to death strategy with its new Workbench and chipsets for the Amiga: the depressing numbers of people lining up to buy games consoles rather than real computers.

Tom Frisina

Three Sixty Pacific

Pros: Further confirmation that **Harpoon** is entrenched as the most popular computer wargame to date; the successful completion followed by the intense consumer acceptance of **Megafortress**; continued confirmation that computer-based entertainment software has a solid, growing foundation on which to build for the decade ahead.

Cons: The market's refusal, in America, to accept **Blue Max** and **Das Boot**, a reaction which we improperly gauged during their premature release; on becoming aware that it takes 18 months to do great product, or maybe I should say four programmer years over an 18-month period.

John Ingram

RAW Entertainment Inc/Storm Computers

Pros: Without a doubt the attitude of American software purchasers who have been supportive of RAW's aims, suppliers of ideas, vocal in their support of a new publisher, and mature in their criticisms. If the leisure software buying public continue in this vein then we can be very optimistic about the future of the market here. A mature, vocal customer base will lead to a more mature responsive software industry – one we'll be happy being a part of. The quality and customer care orientation of small publishers/design teams.

Cons: The attitudes of some parts of the industry towards new publishers and new ideas, and the computer wargaming sector (two areas we are heavily involved with). After the success of **Harpoon** you would think wholesalers and retailers would support the wargaming niche more, but in general they don't. New ideas tend to come from the smaller publishers – **Sim City** from Maxis for example – yet the industry still treats the little guy with disdain.

Bonjour Mickey Mouse

TOP FRENCH company Infogrames has signed a deal with Disney Software guaranteeing it distribution rights for Disney products throughout Europe.

Most of Disney's range is understandably based on the famous cartoon characters. The first release both in the UK and the US will be **Hare Raising Havoc**, featuring the world's second most famous bunny, Roger Rabbit.

This puzzle cum adventure game with time constraints also includes spiffing animation and a cartoon soundtrack. Expect to see it in December for the PC and Amiga.

Hare Raising Havoc will be followed by five games starring the world's most famous mouse, all of which will have an educational bent.

For older users there is **The Rocketeer**, based on the film of the same name. The description 'arcade adventure' does not do justice to the game's stunning 256-colour VGA graphics, but that is what it is.

For anyone unfamiliar with the plot, this is a 1930s style adventure featuring large Nazis and nasty moustaches. The player as hero must save his kidnapped girlie from the villainous fascists, the G-Men, and the world in general. En route to glory or sudden death, opportunity will knock to fly 1930s' racing planes, or more worryingly, the experimental rocket pack.

What a source: simple add-on sound for PCs at a low price

Another flight-oriented game from Disney is **Stunt Island**, described as a 'flying and filming simulation'. The title refers to the island created specially for the filming of movie stunts.

The program not only allows the user to perform stunts but also to film, edit, and set music to an action-based stunt flying movie, through the use of an editing studio and a scenery construction feature. In addition there will ample opportunity to study the art of filming and choreographing stunts and camera placement.

For anyone seeking to emulate the great Walt there is **The Animation Studio**. This is a full-featured animation and paint program that uses state-of-the-art cel animation techniques characteristic of the Disney style. In addition to all the studio tools that one has now come to expect from drawing programs, the package comes with a demo disk starring the world's most famous duck created using **The Animation Studio**.

The most revolutionary product, however, is the Sound Source. On the face of it, nothing could look less revolutionary that an object that resembles a 1950s' transistor radio. And yet the Sound Source will transform PC sound as we know and loathe it.

The radical element, ironically, is its simplicity: no screwdrivers, no fumbling around in the mass of wires trying to find the nut that just fell off. Instead, just plug the contraption into the printer port of the PC and the bleeping PC will be a thing of the past.

Sound quality is not in the Sound Blaster or Adlib class – a better comparison would be a mid-priced transistor radio. Disney designed the Sound Source as it realized that the an important part of the appeal of the cartoon characters was the sound. Imagine a silent Bugs Bunny or Donald Duck, for example, and the logic of the Sound Source becomes clear.

But it is not only Disney characters who will emerge from the speaker: Microprose, Electronic Arts and many of the major players have agreed to support the product in their upcoming games.

Perhaps the biggest guarantee of this, though, is the price, a mere £30 (UK) or $39.99 (US). Beep, beep, to that!

THE CONVERTED

4D Sports Boxing (Mindscape) for the 1Mb Amiga

Silent Service II (Microprose) for the ST

Ultima VI (Origin/ Mindscape) for the ST and Amiga, both 1Mb only. Hard drive supported

Rules of Engagement (Mindcraft/Electronic Arts) for the Amiga, 1Mb only. Hard drive supported

Origin goes for gold

ORIGIN Systems has announced that **Wing Commander II** has sold more than 100 000 copies in less than 60 days, making it the company's best selling game.

Additional missions for the program are available on a disk called **Special Operations**.

Origin Systems' products are distributed in the UK by Mindscape.

Chess heavy

INTERPLAY'S award winning game **Battle Chess** will be one of the first leisure software programs to be released that will incorporate multimedia extensions.

Battle Chess for the MPC is the stylish title of the program and it will run under Windows 3.0. In addition to the usual animations, this new version will feature an animated tutorial which will contain play tactics and a humorous history of each character in the game. The voices used were recorded in a Hollywood studio using professional actors.

The graphics alone occupy 100Mb of disk space and are 256-colour VGA. Full soundboard support is offered for digitized effects. Modem play is supported.

Expect to see this product late January both in the US and UK.

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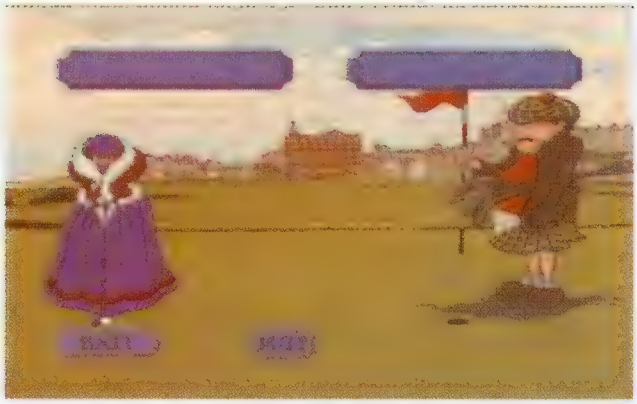

Britain great again shock!

GIANT multi-national firm Philips has won an award for its **Great British Golf** CD-I title. The award is in the consumer category of this year's British Interactive Multimedia Association awards.

The game was one of the first CD-I titles to be developed by Philips in the UK. The disk is part of the golf package developed for early adopters of CD-I that Philips is currently promoting.

Here's the deal: four more CD-I disks including - **The Palm Springs Open** (to be reviewed next month), a teach yourself **Rules of Golf** disk, and a trivia game disk.

Hardware includes a CD-player with a remote control. The price of this package is £799 in the UK and $999 in the US.

Storm forecast

THE TACTICAL naval simulation **Action Stations** is now joined by two new utility disks.

In all 13 new scenarios are provided: Surigao Strait, Java Sea, Samar, Samar II, The Battle of Cape St George, ABDA Strikes Gold? Great Pacific War, North Sea, North Atlantic Sweep, Black Sea Invasion, Mers-El-Kabir, The Bay of Biscay, and Operation Domino.

Utilities include a SWAPP-ADD program which enables ship classes to be added and edited without going through the scenario editor.

Both disks are available at a cost of £16.99 including postage or $19.95 in the US plus $2 shipping.

Version 3.2 of the **Action Stations** program for the PC is also available. Registered owners can obtain this upgrade by contacting Storm (UK) or RAW (US) direct. The upgrade costs £5.99 or $10 plus $3 shipping. The Amiga upgrade is to follow shortly.

Action Stations programmer Alan Zimm is currently working on **Fleet Commander** – a Second World War naval sim with state-of-the-art VGA graphics.

Hats off to Nap

LET'S face it, war has never been one of life's great sartorial experiences. A possible exception to this is Napoleon who, from all accounts, was a right old dandy. This did not excuse his extremely daft hat, however.

It is the hat, though, that will be given due prominence in Impressions' new game **Great Napoleonic Battles**. In addition to millinery splendour the game contains three battles: Waterloo, Quatre Bras and Marengo.

The program also contains a comprehensive scenario editor comprising a map editor, a man editor (!), and a war editor. All these may be used to customize the battles provided, or create new ones.

Unlike the many of the previous strategy games from Impressions this will be a turn-based program using a new hex based system. Unusually for a wargame, **Great Napoleonic Battles** includes optional FX sound.

Great Napoleonic Battles will be available for the ST and Amiga this month, with the PC version to follow in early 1992.

Sky pilot's dream

SO YOU thought there was no point in buying a CD ROM drive? Then hear this and hang on to your hat, er, helmet.

Flightline Electronic Publishing Inc has announced the availability of the CD ROM **Accident/Incident Archive**, a collection of details on every aircraft accident and incident that has happened since 1973.

There are over 150 fields of data on more than 114 000 mishaps. They describe the aircraft, pilot, location, cause and contributing factors, weather, airport, and text remarks.

US readers should call 800 842 1716 for more info. UK readers should await further announcements.

Puerto Rico Links Up

ACCESS Software recently celebrated sale number 100 000 of its golf game **Links**. To coincide with this the company has released the **Dorado Beach**, Puerto Rico course disk. In January this will be followed by a course disk for **Barton Creek** in Austin, Texas.

Early next year is the anticipated release date for **Links** for both Windows 3.0 and a multimedia (PC) version. The Windows version will contain several new features such as separate windows for swinging, scoring, and top view perspective. The Multimedia version will take full advantage of the storage capacity of CD ROM with video and audio data being generated to give the player the feel of the actual course. There will also be a fly-by of each hole.

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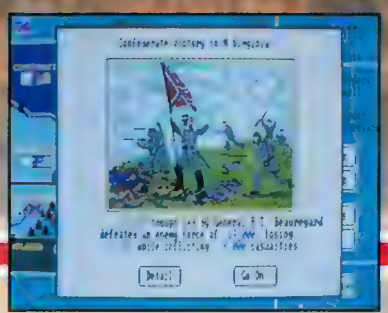

Screen displays shown are IBM EGA DISPLAYS.

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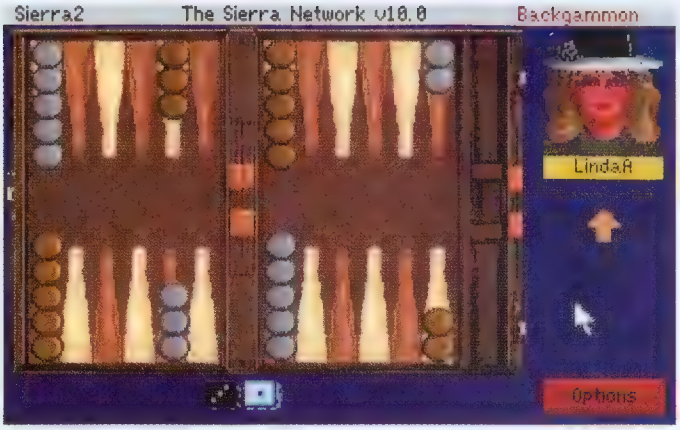


DIAL-A-GAME

Throughout the past decade, modem usage has become an essential part of many computer users' lives. A modem allows one computer to communicate with other computers, overcoming the differences in CPU type. Several on-line networks have sprung up in the 1980s bringing computer users closer than ever.

The Sierra Network is one of the first on-line networks to hit the phone lines *this* decade and clearly an abundance of potential. TSN (The Sierra Network) is radically different from any on-line service available at this time in that its *raison d'etre* is to allow groups of people to get together and play games in real time over their computers. What makes this system really unique is that it is owned and operated by a software company whose intention is to bring its computer games to the multi-player on-line world.

From installation, to actually playing the games on-line, the entire process is simple and straightforward. When the software is run for the first time, an on-line persona must be created. TSN allows the creation of an on-line face using different variables such as the sex, skin colour, head size, hair style, nose, eyes, mouth and so on.

Skilful approach

Once the visual aspects of the persona have been created, the TSN software allows the user to set his or her skill levels and interests for the various on-line games. A list of hobbies and interests are now presented to the user. Four items can be selected from the list.

On-line users may view the persona that has been created together with all the other details that have been entered. Several personas can be created so the entire family can use TSN without having to run separate programs or change the customer id. Changing from each persona is as simple as clicking a mouse button.

Getting on-line is simple: a Sprintnet or direct access number is chosen from a list provide by TSN. Sprintnet is a telecommunications network that is located throughout the United States. It allows local access to distant computer networks that can only be accessed by calling long distance otherwise.

If there is a Sprintnet number in the area, then, for a small charge, TSN can be accessed without paying a long distance bill. This number is entered on installation along with the customer ID and other assorted information. Choose the on-screen persona that represents the user and click on the play button. While the modem is dialling, TSN treated me to an intriguing view of a mountain range

Randy Snow calls Sierra On-Line

and my modem signal being sent to a satellite – definitely an improvement over a 'connect at 2400' message.

Now that the computer is connected to TSN, a list of users on-line is shown. The persona's are not seen unless the look command is chosen. The user's names appear in a rectangular box and different icons tell what the user is involved in: a game, reading messages, or watching someone else play a game. From here there are several options to choose from: talk to users on-line, look at someone's persona, watch a game in progress, invite someone to play a game, and browse the bulletin board area are just a few.

There are six games to choose from: bridge, chess, checkers, backgammon, cribbage, and hearts. All the games are two player games with the exception of hearts which allows four players. The computer takes a few seconds to set up the game board and the players face off with whatever game they have opted to play.

From my observations, TSN does not really look like it is set up to handle a message base very well. It does have a message base with six different sections, but users do not seem to be flagged if messages are left which creates a real inconvenience. I had to manually go in and read the messages every day. Some sort of automated procedure would be helpful. Downloading messages is possible but can not be automated. They must be downloaded one by one to a file. TSN is set up for gaming and the message base reflects this.

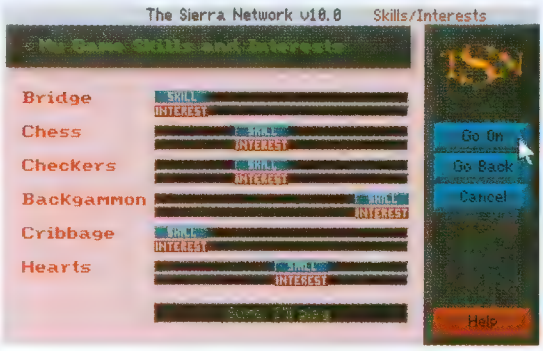
To baudly go

The entire Sierra Network is graphics driven. When playing games, the game board is seen and the different game pieces can be manipulated with the mouse. TSN is not slow in shape or form, even at 2400 baud. Owners of 9600 baud modems will be happy to know that 9600 baud access lines are available. Although sound is limited to PC bleeps at the moment, Sierra confirmed that Roland, SoundBlaster, and Adlib will all be supported in the near future. VGA graphics are recommended; a hard drive is also a must.

Price? It costs $11.95 to access TSN from one of its flat rate cities. That includes unlimited access for one month. The Sierra Network will inform you if you are in one of these cities upon subscription to the service. If Sprintnet is used TSN is an extra $4.95 a month, plus $2 an hour 6pm to 6am or $7 an hour 6am to 6pm

Theme parks

Sierra is working on two new additions at this time, SierraLand and LarryLand. Both are what might be described as on-line theme parks. In addition to the aforementioned games I also learned that the network versions of Sierra's own **Red Baron** and **Stellar 7** should be going into beta soon. Sierra UK is still monitoring modem usage before attempting a similar service and then, of course, there is the intrinsic hostility of British Telecom to overcome. ❑



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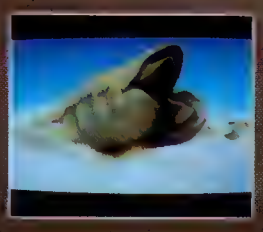

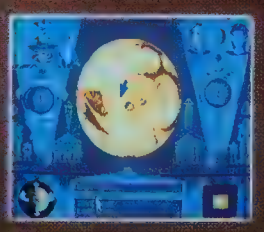

Virgin GAMES

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RETREAD

Brian Walker looks at two recent conversions

Although available for sometime on the PC (at least in the UK – the US release was delayed owing to a contractual wrangle) **4D Sports Boxing** now makes its appearance on the Amiga.

The PC version gobbles up a fair bit of RAM and a fast processor is recommended if the boxers are to show any brio. At first sight this does not augur well for the 7MHz Amiga 500, and at second sight this analysis proved correct.

The premise of the game, like the sport itself, is simple: hit the opponent hard and often. Within these slender parameters the designers have managed to include more options than one would find in a Wall St brokerage.

There's the gym, for example, where not only may one's pugilistic alter ego be constructed, but the fighting attire be custom designed (fetishistic users may care to note that girlie boxers are only available as opponents).

From there it's on to a bit of training to compensate for the weak points leftover from the aforementioned construction phase.

In the main event of the evening every camera angle ever thought of is present plus, of course, the ubiquitous action replay. All these lend immense pizazz to the proceedings even if they do make the program feel more like a sports cameraman sim than a boxing game.

The main drawback apart from the speed problem was the lack of joystick response. As soon as the bout started my boxer failed to respond to my frantic wagglings – a terminal mistake. When I was able to elicit some movement the response was dramatic; a knockdown! Unfortunately my boy refused to retreat to a neutral corner (despite more frantic prompting) resulting in disqualification. I don't know how prevalent the joystick problem is, but you have been warned.

Take that you blockhead – 4D Sports Boxing

Like most such games **4D Sports Boxing** works much better for two players, or even better, as a tournament. What better way to spend Sunday afternoon than rearranging the features of one's future ex-friends?

Strike Fleet

Every once in a while someone in the software business has an idea so stunning, so devastatingly original, that one can only gasp in awe at the audacity of it all.

The re-release of **Strike Fleet** for the Amiga and ST is not such an idea. In its time (1987) this was a perfectly respectable naval sim, but now it is primarily notable for the fact that it was designed by Lucasfilms before it became the force it is today.

Let the records show that **Strike Fleet** is a command level game containing 14 diverse scenarios – everything from the Falklands to the Third World War.

A task force must be constructed at the start of each scenario by the 'commander'. Ships may be 'bought' using points. This is a well-tried but still effective formula as it allows the player control over which strategy to pursue.

The game play is an odd mix of complexity (in the amount of data available) and simplicity (in the lack of tactical options). All this is quite deliberate as Larry Holland makes clear in his excellent design notes. The problem is that these were written in 1987 and many ships have passed under the bridge since then.

Given the refit, it's reasonable to expect some graphical improvement and while anything is better than the CGA of the original PC version, the yucky technicolor of the Amiga graphics make it a close run thing. The primary yellows and reds used here, apart from dazzling the user, seem to actually warp the resolution. Yes, I know the Amiga has an exciting colour palette, but someone should tell remind the designers of the four seasons – too much sun can be boring.

Strike Fleet is really for the naval sim completist. It's not a bad game, but in the wake of (pun intended) **Silent Service II** and **Action Stations,** it comes a distant third. ❑

4D Sports Boxing

Designed by
Distinctive Software

Published by
Mindscape (UK), Electronic Arts (US)

Systems
IBM PC, Amiga

PC graphics
VGA, EGA

Supports
Adlib and Roland sound cards; mouse, keyboard and joystick

Players
1–2

Notes
Hard disk strongly recommended. In the Amiga version only one boxer may be saved per disk

Strike Fleet

Designed by
Lucasfilms

Published by
Electronic Arts

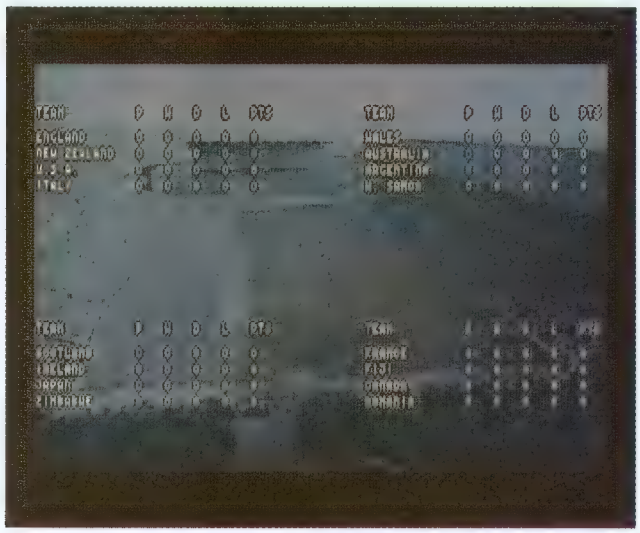
Systems
IBM PC, ST, Amiga

Supports
PC version supports CGA and just about nothing else

THE SPORTS LOCKER

Fancy a ruck? John Harrington writes on the Rugby World Cup and British sports simulations

Rugby: The World Cup (below and facing): a no frills action game



Broadly speaking, there are two types of game on a sporting theme: the arcade action game and the management simulation. British software houses, as you would expect from companies operating in a market dominated by shoot 'em ups and other kiddie-fodder, have produced a few reasonable action games based on soccer (hereafter referred to by its more common name, football), with Anco's **Kick Off** being the market leader.

But for some reason, the management games have been uniformly awful examples of number juggling, with little or no attempt made to simulate the real teams and players in the football league.

The blame for the unspeakable crassness of all British management games can be largely attributed to the undeserved success of a game called **Football Manager**, designed by Kevin Thoms back in the early 1980s and subsequently revamped several times.

Boss cats

The game used a lot of old ideas first seen in a 1960s' boardgame called **Soccerboss**; that is, the team of 11 players was divided into four areas: goalkeeper, defence, midfield and attack. Individual players were assigned skill levels and these levels were aggregated to provide area levels, thus enabling the strengths and weaknesses of opposing teams to be compared.

So far as I can remember – and believe me, I have tried to forget the horrors of this game system – the rules to **Football Manager** gave no clue how matches were resolved.

This lack of information is a very common feature of British sports management games. They like to keep you in the dark about game mechanics, either because they assume the player has divine powers of intuition or, more likely, because the game system is about as well thought out as the idea of selling sleeping tablets in a sex shop.

With **Football Manager**, for instance, the logical game mechanic would be to compare the strength of complementary areas: attack versus defence, midfield against midfield. However, with **Football Manager**, it is just as likely each team's goal-scoring chances are assessed independently, and all the attempts to counteract the opposing team's strengths could be entirely pointless. Who knows? Certainly not the poor old player.

Football Manager continues to sell to this day, despite having many other obvious drawbacks. For instance, the game features the names of real footballers such as John Barnes, but the skills of these players bear no relation to those of their real-life counterparts.

Juggling act

Furthermore, at the end of the season all of the skill levels are juggled and randomly reset; long-term planning, what's that? How about players who improve with experience or lose a step owing to old age? Nope. Entirely random fluctuations in skill is what it's all about, guv.

In **Football Manager**'s wake came a glut of clones. Many added extra skill definitions, so that players were rated for tackling, passing, heading, shooting, stamina, pace and hairstyle (it's absolutely essential for a British footballer to have a naff hairstyle).

Training regimes were incorporated in some games but no feedback was given on the success of the training.

Financial aspects were brought in so that managers had to worry about ticket prices, bank overdrafts, wage negotiations and hairdressers' bills. Generally speaking, the number of decisions that had to be made increased but the problem remained that little or no information was provided to enable the player to evaluate the success of those decisions.

Teams could get promoted or relegated, win or lose matches, and the manager would have no clue why it had happened except perhaps that he had sold some duff players and bought some good ones.

Hatchet job

So far as I am aware, no game to this day has incorporated any of the following elements, many of which are quite common in play-by-mail football management games: sweepers, man-to-man marking, 'hatchet' men, the long ball game, target men, midfield play makers, packing the midfield, overlapping full-backs, set pieces in dead ball situations, time wasting, 'gamesmanship' (cheating),

utility players, link men, tactical substitutions and the option of playing players out of position.

Although most games offer the opportunity to wheel and deal in the transfer market there is no sense of buying a player who will fit in with the playing style of the team; that is because no game has yet been designed that enables a manager to create a team with a specific style, such as a crude 'route one' team like Wimbledon or a fancy dan skilful passing team like Tottenham Hotspur.

The recent Rugby World Cup has encouraged a number of rugby games to emerge on to the market, among them D&H's **Rugby Coach**.

a forthcoming opponent, except there are no tactics: just pick your best side and hope it wins.

In rugby, as in football, it seems management has little to do with devising match tactics.

Coach trip

It is rumoured that D&H intends to bring **Rugby Coach** out on the IBM PC in December. In rugby terms it is one game that will not score any points for the conversion.

But wait! There is hope. On the arcade side some reasonable football games have been produced, even though football is not a particularly

Anyone hoping that switching to a different sport would encourage the game designer to come up with fresh ideas is going to be sadly disappointed.

The team area values used in football (attack, midfield and defence) have been changed to overall ability, try scoring and kicking – the latter presumably refers to the team's skill at kicking the ball rather than kicking the opposition, although a dirty play option would be a blinding new development in British sports management games.

Real clubs, both Rugby Union and League, have been used and, from what little I know about rugby, real rugby players' names have been incorporated as well. It's possible to 'spy' on the squad listing of any club and to get a general idea of the skill levels of their players, which would be useful in preparing tactics against

suitable sport for the arcade format. The game moves too fast and the action switches from one end of the field to the other too frequently, which means most games employ a 'radar' superimposed over the action to indicate what's happening to those players off screen.

To keep an eye on the ball and what's happening on the radar would tax the footballing vision of Michel Platini, never mind Johnny Joystick, but the games do seem to be rather popular.

Growing trend

As a result there now seems to be a trend to add on a managerial aspect to successful arcade football games. **Player Manager** and **Manchester United Europe** are two cases in point, albeit two cases where the managerial aspects are still lousy. At least, to a small degree, one's coaching decisions do have an impact on how one's players perform on the pitch.

Rugby is a much more suitable game for arcade conversion as the action is compressed on to one screen, except for the occasional punt up field, which I understand is meant to be part of the game (unlike in football, but you'd not know it from looking at England play!). Making an action rugby game, therefore, should not be too difficult and this 'no frills' approach appears to be the route taken by Domark with **Rugby: The World Cup**.

Audiogenic's **World Class Rugby** takes the thing several stages further, not only featuring the teams of the World Cup, but most of the players who played for them. Each player is rated for several abilities such as ball handling, stamina, strength and speed, so that he performs much like his real life counterpart.

Hair-tearing

Watching the computer control France and tearing your hair out at the tendency of the French team to overelaborate with tricky scissor movements is (cliche alert!) just like the real thing.

World Class Rugby has several other sensible features such as variable weather conditions, difficulty settings and, most interesting of all, a slot for future expansion. Does this mean that we can look forward to updated team disks, as is the norm in many American sports games? I surely hope so.

Perhaps if **World Class Rugby** is successful, it will encourage other British software houses to learn from the Americans.

We British sports gamers deserve the chance to manage football or rugby teams that actually bear a passing resemblance to the clubs whose names they bear. We deserve the chance to devise tactics to outwit superior opponents.

And, hey, how about giving us comprehensive statistics on how our players performed (such as tackles attempted/tackles won) so *we* can determine how good they are, rather than just imposing a set of numbers on us that are supposed to *tell us* how good they are?

In the words of Patrick McGoohan: 'I am not a number, I'm a free transfer!' ❑

The Games: Winter Challenge

Get your skates on

By Brian Walker

Designed by
Mindspan Technologies Inc

Published by
Accolade

Systems
IBM PC

PC graphics
256-colour VGA, EGA

Supports
Adlib, Sound Blaster, Roland LAPC-1/MT-32, Thunderboard sound boards; keyboard, joystick, mouse

Players
1–10

Notes
Installation problems were experienced on the finished version we received. If in similar difficulties, copy to the hard drive using DOS commands

Synchronized swimming apart, few sports can claim to be so inadequately represented in software form as those that involve plummeting down a mountain on a pair of planks. That's right, folks, we're talking winter sports. Attempting to step into this chilly breach is **The Games: Winter Challenge**.

If there is to be any criticism to be made of this product then it certainly won't be for lack of completeness. The program includes no less than eight events: luge, downhill skiing, cross country skiing, bobsled, speed skating, giant slalom, the biathlon, and ski jumping.

Barely before the player has donned a bobble hat, it becomes clear that the designers have jettisoned any strategic possibilities the sports offered in favour of a graphical tour-de-force. In the background the Alps loom forebodingly, while in the foreground Big Ed comes plummeting down the mountainside in a manner every bit as realistic as that recorded in home movies of his winter hols.

Following the opening ceremonies, it's on to the bobsled event. Anyone who has ever watched this exciting event on television will quickly be aware of something missing in the game. That something is sound: the deadly roar as the vehicle thrashes around the course at 80mph and more. The aural excitement here is confined to the occasional slither.

The other problem I found was that the bobsled appears to steer itself (look, mom, no hands!) reducing player input to braking at certain points on the course.

On next to cross country skiing which quickly lives up its own description as an 'endurance' event. Barely half the course has been completed before my index finger feels like it's about to drop off – the result of pounding the fire button in an attempt to keep my alter ego in an upright state. In this, as in most of the events, the object is to achieve the best time.

The best events from a player point of view are the one's where skis play a predominant role. The giant slalom, the ski jump, and the biathlon are all great fun.

The biathlon has a shooting competition in the middle of the ski run: the player dismounts alongside the targets and then attempts to score a bull with what looks like a crossbow. Anything off centre results in a time penalty in addition to the time already spent firing.

In the ski jump the excellent action replay facility really comes into its own. Here is the chance to replay that stunning run, or a 'tragic miscalculation' as the manual delicately puts it. There is a fast forward and reverse so that any such tragedy may be examined in detail. Points and medals are awarded in each event culminating in an Olympic ceremony where the overall winner is announced. Best times are stored for posterity and replay value.

Playing against the computer is a somewhat mindless experience, but against fellow humans some fun can be obtained. The net feeling is that an opportunity has been missed to do for winter sports what **Links** did for golf. The graphics are certainly there and almost make up for the shallow game play. As it stands **The Games: Winter Challenge** resembles a computer game for people who don't like computer games. ❑

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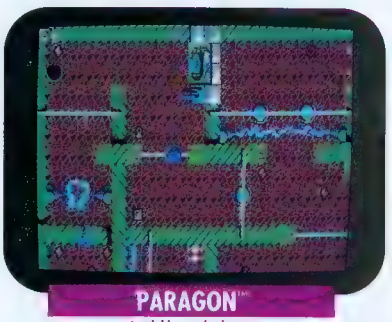

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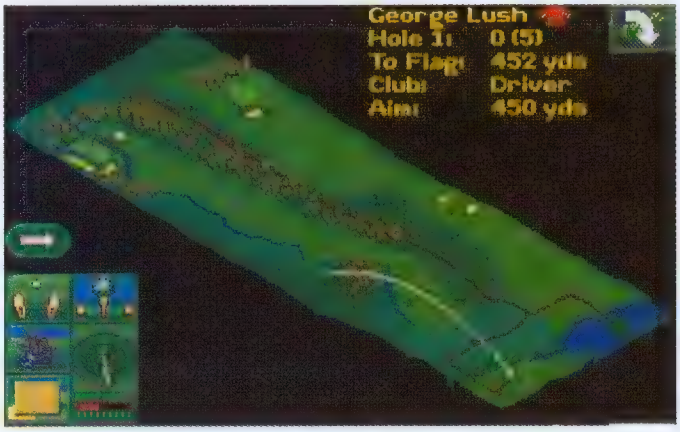

MicroProse Golf

Shake rattle and stroll

By Brian Walker

Designed by
Lee Hodgson and Mark Davies

Published by
Microprose (UK)

Systems
Amiga and ST; PC version to follow

Players
1–4

Notes
The US title will be Greens when it is released on the PC format in the second quarter of 1992. VGA graphics and modem play will be supported

The self-styled Home of Sims (UK branch) is also the home of quite a few golfers. It was this interest that was at the root of the decision to move away from the busy silicon skies to the equally cluttered computer-generated golf courses.

Big M staffers played quite a few golf sims in their lunchtime it seems, but found them all wanting for 'two reasons'. The primary cause of their dissatisfaction was the two-dimensional nature of the current crop of golf sims. As a consequence the manual makes a big deal out of the three-dimensional nature of **Microprose Golf**.

Time for a reality check, guys. It's impossible to depict a genuine 3D image on a two-dimensional monitor. This detail, however, need not disqualify the game from serious consideration. If, as Microprose says, its staffers tried the other golf games on the market then they would no doubt have gleaned *something*.

The first lesson to have been learned would appear to be that the existing manuals are too short. The tome accompanying **Microprose Golf** is quick to make amends: 112 pages, no less. In addition to the manual, maps of each course and a club selection chart is provided. The reason for this apparent extravagance quickly becomes clear: round up all the golf games currently on the market, add together all the options contained therein, and chances are the total wouldn't come close to those to be found here.

The handicapping facility must be the most comprehensive ever in a golf game, then there is the excellent selection of match options: stroke play, match play, medal, skins, head-to-head, tournament, singles, three ball, four ball, best ball three, best ball four, threesome, and foursomes.

But so much for the clubhouse, and on to the course. The first view of the hole is on the isometric map. It is from here, rather than on the tee, that most selections are made (through a set of icons). Direction is set by dragging a white line that depicts the ball's intended path.

Driving is conducted with a variation on the familiar power bar. This is a three-click job, the tweak being that the more power used the shorter the 'sweet spot' (a white line used to gauge accuracy with the third click) will become. Putting uses another power bar and this relies largely on 'feel' rather than precise calculation.

An odd thing happens when the green is reached; the golfer vaporizes into thin air! All that's seen is the ball, and the hole, of course. This is extremely alarming and at first I thought it was a bug. Microprose told me that the reason for this abrupt vanishing act is because the sprite would 'get in the way of the hole'. This seems odd, to say the least. **Links** has no such problem, neither does **PGA.**

Perhaps now is the time to see how **Microprose Golf** stacks up against the opposition that Microprose found wanting. It doesn't have the course builder that is **Jack Nicklaus'** *raison d'etre*. It certainly doesn't have the graphical splendour of **Links**, and it doesn't have the ease of play and structural elegance of **PGA**. What is does have is several new ways of playing the game. It also has the best statistical database I have seen in a golf game – each shot for each hole is recorded and saved.

Is this enough? Not for this particular golfer. I would have found the graphics extremely disappointing even in pre-**Links** days, but now the polygon look just doesn't cut it, three dimensional or no. It plays havoc with the ball bounce and roll, and generally looks unattractive.

The post shot scrolling is a nice idea in theory, but here it adds little to the game. The reverse perspective in **PGA** is far more effective as it provides a precise guide as to exactly where the ball is going to land.

The courses have a distinctly anonymous feeling about them and not just because the six provided here are fictional. This is part of a certain coldness that pervades the game in general. Not even a 'great birdie' or 'nice shot' comment when a ball goes in on time.

Links felt like a labour of love. **Microprose Golf** feels like a labour of technique. Microprose's claim that it found other golf sims lacking something or other is perfectly valid. I feel the same way. But **Microprose Golf** is not the answer. ❑

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Reader Service No. 88

ABC Wide World of Sports Boxing

TV Sports Boxing

By Brian Walker

Designed by
Acme Interactive

Published by
Data East (US), Mirrorsoft (UK)

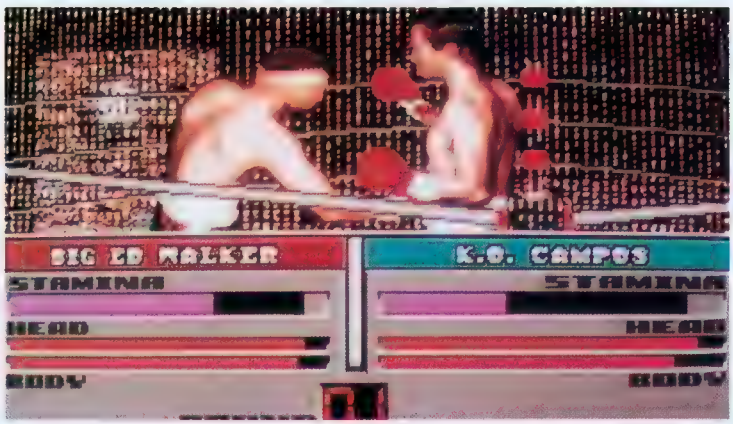
Systems
IBM PC

PC graphics
256-colour VGA

Supports
Roland and Adlib sound boards

Players
1–10 (2 simultaneously)

Notes
ABC Wide World of Sports Boxing is known as TV Sports Boxing in the UK. Reviewed on a 386/40



Cinemaware established a reputation for producing games that were graphics intensive, but still able to engage the brain.

Unusually for an American company its games were programmed (and thus released first) on the Amiga. The received wisdom was that ignoring the premier format in the vital US market was the reason for the company's downfall, plus the fact that when the PC versions did finally arrive they simply didn't work – **TV Sports Basketball** and **It** being notable examples of the blank screen syndrome.

Cinemaware is dead, long live Acme Interactive. In effect this is the same company except now it is concentrating on the PC. The first results of this transformation can be seen in **TV Sports Boxing,** to use its UK moniker.

Blank look

After installation, I typed VBOX to execute and what happened? Why, a blank screen and a lock-up – history repeating itself as farce? How else can one describe the fact that some twenty-odd people were involved in the production of this game yet not one managed to notice that the program will not run as specified? Eventually I was able to launch it from Windows 3.0 (of all things), but really!

The opening menus will be familiar to anyone who has ever played a Cinemaware product before. Glorious colour, lifelike figures, nice humour. The first action is to create a persona and a boxing style. After this it's on to the gym to meet the manager and trainer, both of whom may be replaced for tactical reasons if required (each trainer has his area of expertise).

The make-up of the boxer is determined by allocating points from a pool. All this, and the statistical database showing prospective opponents, is handled with great flair in typical Cinemaware style. The documentation too is stylish and informative.

Unfortunately, everything goes horribly wrong come the main event. The boxers look real enough and are a considerable improvement on the boxing blockheads in **Sports 4D Boxing**, but the speed at which these guys move make Sonny Liston look like Sugar Ray Leonard!

Slug fest

When boxers get within striking distance of each other the perspective switches from top-down to side-on. The latter might be satisfactory if it were not for the aforementioned sluggishness, as it is it merely compounds the speed problem. This, and the indistinct relationship between joystick movement and punches thrown, resulted in fatalism settling in at an early stage of this young pug's career.

Another downer was the sound, or rather the complete lack of it. At first there was a pleasant, if irrelevant, soundtrack. As soon as the fight began, this was replaced by what sounded like a chicken being strangled inside my PC speaker. No sound of leather on flesh here. No crowds yelling 'gwaaaaan, my son'. Just an eerie silence punctuated by a few squawks. As fights go, it had all the atmosphere of a supper table discussion in *Little House on the Prairie*.

There is an option for the computer to control the fighter in the ring thus placing the emphasis on management, but the essence of boxing is the fight itself and relinquishing what little control one has must have limited appeal.

Clearly a lot of time and effort has been expended on this game, and I would be the last person in the world to start preparing a new coffin for a 'corpse' that has only just found new life, so to speak. Unfortunately, **TV Wide World of ABC Sports Boxing** does not augur well for reincarnation. The body and external features are clearly in good shape but the heart, inexplicably, is somewhere else. ❑

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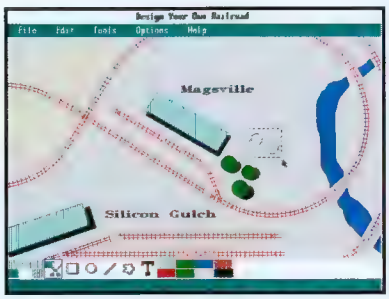

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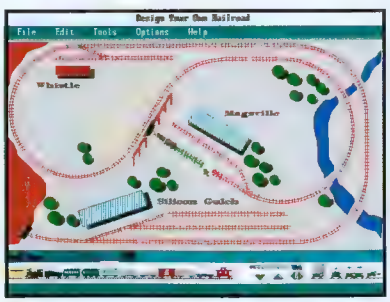
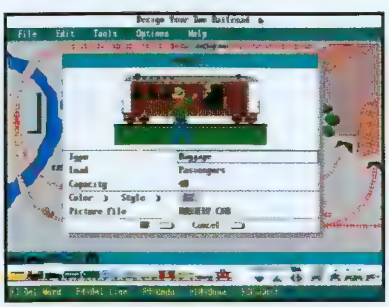


RUN! Make up a train and drive it down the track! Operate track switches. Each train has its own controls. But be alert! A crash leaves wreckage scattered everywhere!



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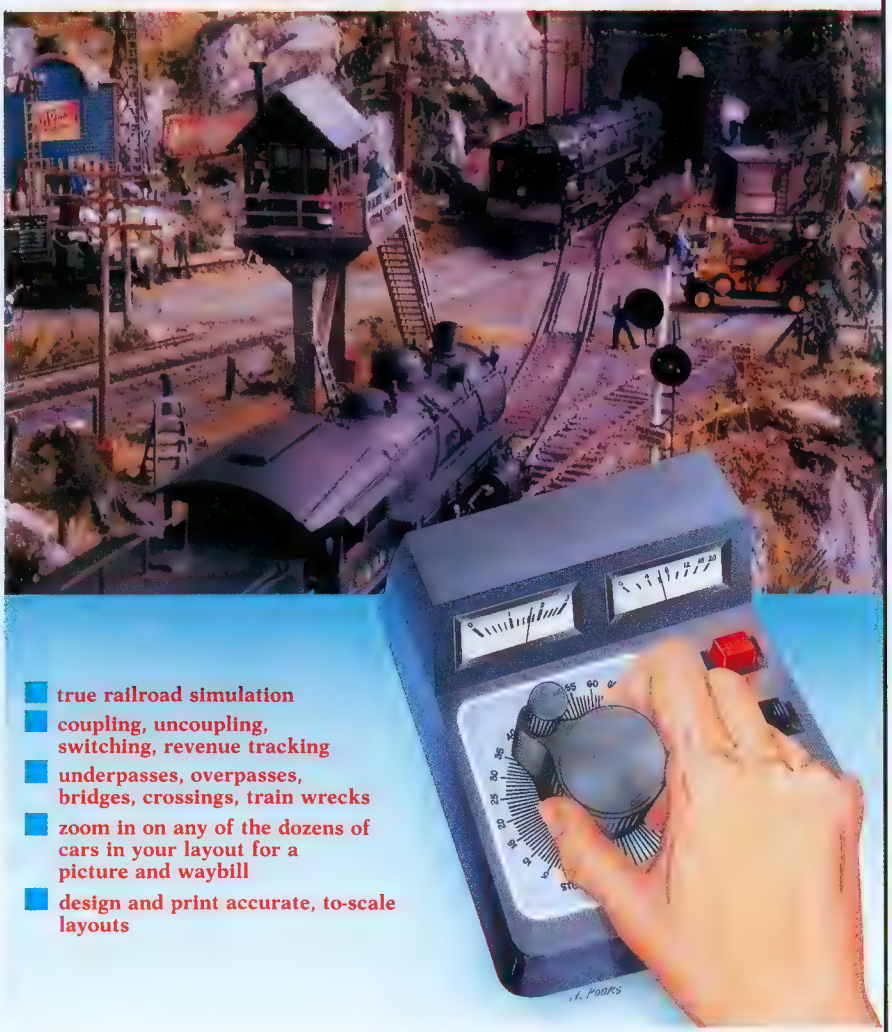

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Mike Ditka Ultimate Football

Tight in the end

By Richard Lawrence

Published by
Accolade

Designed by
Gene Smith

Systems
IBM PC

PC graphics
256-colour VGA, MCGA, EGA

Supports
Adlib, Sound Blaster, Roland LAPC-1 and MT-32 sound boards; mouse, keyboard, joystick

Players
1–2

The football gaming community has long seemed doomed into making a choice of gaming styles – the statistics based, realistic game with sparse attention to graphics and emphasis on strategy, or the flashy arcade style game with minimal stats but plenty of joystick pumping action.

Accolade must have been listening to the wants of players, as the press guide that came with **Mike Ditka Ultimate Football** describes it as a game that emphasizes realism, playability, graphics, options, and statistics in that order. The company seems to have covered all the bases. After playing the game for a few weeks, I would say the emphasis is on options, graphics, playability, realism, and no statistics.

Probably the most appealing feature of **MDF** is the high degree of flexibility in the game. Just about everything can be edited with the supplied Construction Set module, from the names of the teams and players to their capabilities. This becomes important, because while all 28 NFL cities are represented in the game, the teams of those cities are not. That is to say, there is a team from Washington, but it's not the Washington Redskins – just Washington. This isn't a big consideration for single team cities, but is rather disconcerting for locales such as New York – which in **MDF** has a 'New York National' and 'New York American' conference team, for instance, instead of the Giants and Jets.

Much the same applies for players on the teams – they exist, and have the correct jersey numbers and characteristics for 1990 teams, but their names appear to have been randomly generated.

Sticklers for realism will probably spend their first night of **MDF** with a copy of a sports paper or the NFL Encyclopedia and the Construction Set editor, filling in names sacrificed because of licensing issues.

Unfortunately, not very much leeway is granted on editing player attributes, because **MDF** only has three generic stats to describe each player (speed, skill and strength). Although the distribution of these skills can be changed, the point total for all three must remain the same, and, players can't be created from scratch – only copied from existing leagues.

In addition to names and abilities, the player can also create custom plays using the Construction Set, in case the 132 supplied plays aren't enough. This is a particularly well done section of the game, with an easy to use interface resembling the traditional football chalkboard (except the playfield for **MDF** is in colour).

To determine a route for a player, one simply clicks on the player in question and drags the mouse in the pattern to follow. Special buttons on the left designate where the ball will be passed to, or where the hand off will take place. Assignments can also include run blocking, pass blocking, designating the man in motion, primary receiver, or secondary receiver.

After the play design is finalized it can be immediately viewed in execution either with an opposing defense, or without (to make sure the movement routes don't conflict). Some fairly bizarre plays can be designed, but **MDF** enforces basic NFL rules that keep things from getting too out of hand by requiring a regular offensive line formation, as well as preventing illegal assignments (offensive linemen as receivers, and so on). It's basically impossible to create an illegal formation, or a motion penalty – only one man can be in motion per play.

Scratch attack

Curiously absent is the ability to place players on the field before motion starts, as the only method for creating a play from scratch is to copy an existing play book entry and then modify it.

Actual game play can be done in one of three methods: a single game matching any two opponents, a play-off series where the home team is selected but the opponents are supplied by the computer, and a season mode much like the play-off mode, but longer. Games can only be saved

in the single game mode, so play-off and season mode tend to be lengthy on play time, although a simulate game option allows a score to be instantly generated for any game in the season mode.

Play can either be against the computer or a human opponent, using a variety of input methods (I recommend joystick for controlling players). The user can choose to coach, control players on the field, or both. Various realism options such as fatigue and penalties can be turned on or off for either team, and quarter time can be anywhere from three to 15 minutes. Passing methods from beginner to pro can be selected.

Probably the hardest task facing any American Football simulation is the passing system, which should be intuitive and quick on execution, or the feel of the game will be lost. Accolade has succeeded admirably here, supplying a system that can be learned easily on the beginner level but still carries significant challenge on the pro setting.

The player as quarterback snaps the ball, drops back and waits for a receiver to break open. In beginner mode, hitting the second joystick button at this point freezes the game and displays the primary receiver centred on the screen. Continuing to hit the second button will cycle through the receivers. Hitting the first button will pass the ball, which the receiver automatically catches.

As difficulty settings go up, the quarterback loses the ability to freeze the game when passing, and on the hardest level the receivers will not automatically catch the ball, but must be led towards it.

Play is executed on a polygon rendered playfield, using bit-mapped players. Digitized graphics of officials and special circumstances like injuries add to realism. Sound is also plentiful and interesting.

The game played smoothly on a 386/33Mhz, was fairly choppy on a 386/20Mhz, and on a 286/10Mhz PS/2 machine was unbearably choppy even in the low detail mode. Consider the minimal platform a 386SX or higher.

Memory loss

At first I found **MDF** to be an adequate opponent in terms of computer coaching, but consistent play revealed some of the inner workings of the game and led to some high scoring games in my favour. Eventually I even discovered a loophole that allowed me to win an entire playoff series by calling the same play every down. This reveals the first major weakness in the computer coach: play calling is entirely situational, and the computer had no memory whatsoever of what the human player has done in the same circumstances.

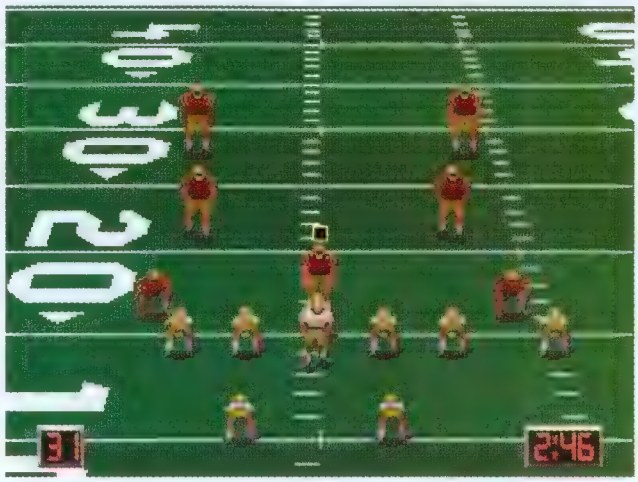
There is also inconsistent play when defending the run or pass – when a run is called, defence seems fairly realistic, but passing to a player results in every opposing defensive player suddenly turning to pursue, even defensive linemen who should have no idea where the ball went. Defensive backs seem to get a sudden burst of speed when pursuing receivers, making it difficult to achieve long gains on passes even when the receiver has broken free of the defensive umbrella.

For instance, in man-to-man coverage, I was unable to get either Jerry Rice of the 49ers or Gary Clark of the Redskins into the end zone, even though they had beaten their man repeatedly. In the real NFL, either of these receivers will score a touchdown 90% of the time they break man coverage. Despite these difficulties, it's very easy to run up the score passing, because completion rates are very high

I also found it disappointing that a game named after one of the premier defensive coaches in the league took such a simplistic approach to calling defence. Play selection is limited to calling the formation, and either a blitz, zone of two depths, or man-to-man. This makes for quick play calling but avoids the nuances that make defence an intricate strategy game. Gone is the ability to assign a linebacker to shadow a quarterback, or plays designed for penetration at a certain point in short yardage runs, the delayed blitz, and so on. Apparently Accolade has made the decision that offence should be the centre of a football game, and it is probably correct that most people prefer it that way, but that shouldn't preclude any type of defensive coaching at all.

In the end, I would probably have to put **MDF** in the same category I do **John Madden** or **Joe Montana** football – enjoyable with a human opponent on the one hand, an exercise in how much of a margin can be achieved against the computer on the other.

Graphically, this game has much going for it, and the amount of options, specifically the play design, give it an edge over similar games. It hasn't broken the mould I cast at the start of the review, but as a joystick-pumper, it's one of the best. ❑



Chip on the shoulder

Yes, this is another letter from a disgruntled Amiga owner! I am sick of reading in your magazine about how the Amiga has 'run it's course', and how much more the versatile the PC is for games. This is absolute rubbish. With particular reference to an article in the July issue about PCs, let us look at some facts.

You state that the PC can be configured to include such things as a mouse, joystick and reasonable game sound. This is true, but each one of these peripherals requires a board to be fitted into one of the expansion slots. You can plug all these directly into an Amiga without any additional hardware.

You talk about the PC expansion slots making it a versatile system compared to a more basic machine like the Amiga. Have you ever heard of the Amiga 1500, 2000, or 3000? Each one of these has approximately 8 expansion slots, and none are used by the mouse, joystick, or soundboard. Which is the more versatile system?

You compare the clock speed of the 286, 386, and 486 to the 'humble' 68000 at only 7MHz, but this is not a relevant comparison, as the Amiga has a dedicated chip set for graphics and sound which makes it appear considerably faster than the nominal clock speed suggests. More importantly, you seem to have ignored the fact that the Amiga is available in many different configurations: 68000, 68020, 68030, or 68040 at speeds up to 50 MHz, maths co-processor up to 50MHz, blisteringly fast 32-bit RAM expandable to an amount far in excess of anything the poor old PC can handle (and without any of those painful memory managers!).

I own an Amiga 2000, 68030/68882 at 33MHz, 65Mb hard disk, and 6Mb RAM (4Mb of which is 32-bit), and a 386SX PC with 2Mb RAM, sound card, joystick and mouse, so I have the benefit of making direct comparisons.

I know which system is more versatile, enjoyable to use, and expandable. Guess which?

Iain McKenzie
London SW12 0DG

And guess how many games are being written specifically for an Amiga 2000? Answer: none. All our comments regarding the Amiga were directed at the Amiga 500 because this is the machine Amiga games are written for. Programmers won't even write for the new 500P let alone the 2000. You also neglected to mention that the Amiga you have costs in excess of £2000 ($3800) without even a monitor! This correspondence is getting very tiresome.

Retail fade

A couple of issues ago you reviewed a new program called **Third Reich**, based on Avalon Hill's boardgame of the same name. It was quoted as being available for all formats, with a UK release date of late August.

I later read in a following issue a letter from a fellow subscriber asking how and where he could obtain a copy of this program. He was told to get in touch with a commercial supplier for such details.

As I am also interested in obtaining a copy to run on my Atari ST (one of the very few strategic games which is apparently available for my machine), I took your advice and wrote to four separate suppliers.

Unfortunately, although I gave them as much information as I could, not one could provide me with an answer. Not one had even heard of the game, and none of them could tell me where I could write to find out more.

Hopefully, as you seem to have received a pre-production copy of the game, you also know how to contact the writers of the program. I would be grateful if you could tell me how to get more info about **Third Reich** and perhaps supply me with an address.

S Turner
Ashton-in-Makerfield
Lancashire, UK

*Despite assurances from Avalon Hill, **Third Reich** has still not been published at the time of writing. When the game is eventually released we'll announce it.*

Depth charge

Do you think it would hinder your magazine to reduce the number of articles in favour of providing greater detail in longer, more extensive coverage of the programs? For instance, in the **Pools of Darkness** game from SSI, there is a strange bug that hurts the party in some temples when they choose to heal.

Given the 14th-40th level player character stats involved, if a cleric remains alive, no need for a temple arises very often. In version 1.0 on the PC, the selection may reduce characters' hit points 30-40%.

One time I brought an injured party through a pool gate to Limbo and had an unconscious cleric, so I chose heal from Elminster's menu. It was a good thing I'd already saved before entering the pool, so I could restart and the next time choose rest to allow the cleric to awaken and perform healing himself.

After that I treated the clerics carefully, but after restoring the Temple of Tyr to usefulness, the same sort of thing happened. Given the very shallow nature of most game publications here, no such bug warnings are ever included.

Does *Strategy Plus* plan to follow similar surface-only tactics, save for a more attractive design and presentation? Most of your articles certainly seem quite short ones so far.

Bill Dawson
San Antonio
TX 78213, USA

*Editorial policy is to provide prompt coverage of new releases and then follow up with more in-depth articles in future issues – see **Patton Strikes Back** and **Pools of Darkness** this issue. If beta testers fail to catch bugs, then it's unlikely that reviewers with far less time will.*

God only knows

How are you and your ministry? Calvary greeting in the name of Lord Jesus. I hope everything is moving on properly over there. If so then glory be to God.

My main purpose of writing this letter to you is that I want to be one of those who you enrol and consider them as one of your members. I want you to send me some of your novels, as you send to my friends, and I find it useful to read.

I will be very grateful if my letter is given a favourable consideration.

Kingsley Igbo
Lagos, West Africa

I've always maintained that reading Strategy Plus *is a religious experience. Perhaps now people will start to believe me.*

Compatible clones

I have noticed that the Chips & Bits advertisement has appeared twice. I wonder if you could be kind enough

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Letters may be edited for reasons of space

to answer my queries in regards to the software advertised. Is it compatible with the UK IBM clones machines. Having an interest in some of the programs, I am reluctant to purchase some at this stage.

D Duke
Erith
Kent, UK

No problem with IBM games. Only Amiga games suffer from transatlantic incompatibility – cue accusations of bias.

Honorary consul

Inspired by the copy of an article that a friend gave me, I attempted to get in touch with the English concern Arena, seeking to purchase a copy of **Reach for the Skies**. The English Consulate, attempting to assist, gave me the address of Arena Software; I wrote to the company, but it had never heard of **Reach for the Skies**.

I am interested in the game, as opposed to Spectrum Holobyte's interpretation, because I consider historical authenticity to be the backbone of **Their Finest Hour**, as well as Lucasfilm's **Secret Weapons of the Luftwaffe**, which I am currently running. My questions are:

- Is **Reach for the Skies** by Arena available for purchase directly from England?
- What is the company's address.
- Will the game work on a PC-compatible, mouse-driven?
- Or, if the simulation has to be purchased by an English resident, can it be legally shipped to the USA?

By the way, I must enthusiastically verify all the good things said about **Secret Weapons of the Luftwaffe** in your November issue, especially the authenticity.

Bruce Dayton
Phoenixville
PA 19460, USA

***Reach for the Skies** will be published for the PC in the UK by Mirrorsoft in January. Arena was a label set up by Mirrorsoft to publish their products in the US, but it has been decided to publish only console games under that moniker. It has not yet been determined who will publish the game in the US, but if you want to order from the UK then contact either Strategic Plus Software or Computer Adventure World: fax 011 44 51 647 6484, or 011 44 81 977 4822 respectively.*

Monkey time

OK, I know you haven't reviewed **Monkey Island** and **PGA Golf**, but they are the best.

Why didn't your survey bother to ask what readers' computer systems are? OK, you're not hardware oriented, but it would be interesting to know percentages.

My personal dislikes are readers or writers who pretend to be or have pet dragons, trolls and so on. Reader sez: bugger off! Or to put it another way: good information, good articles, but please cut out the crap.

Finally, where's the offer of a free sub or software to return the survey form? Better still, is there any chance of some hints for **Neuromancer**?

M Burgess
Slough, UK

***Monkey Island** was reviewed in issue 3. **PGA Golf** was before our time, but look out for a piece on the new course disk.*

I agree pretending you have a dragon is a bit naff, but try to show some of the tolerance for which this column is rightly renowned. Why the hell do people require some kind of carrot to perform even the simplest tasks? What is so wrong about doing something for its own sake?

*No, there is absolutely no chance of any **Neuromancer** tips. Where exactly are you stuck?*

Cover up

First of all I would like to congratulate you on a splendid publication. Strategy products are often neglected by some magazines which just like to play quick-blast arcade games, and it is really good to see that you specialize in this genre.

Now for a question. Why not try a cover-mounted disk, for a trial period only, and see if it's popular? The disk could contain demos of new releases and historically correct scenarios created as add-on disks for existing games.

I'm sure the disk would be popular with your readers, but if not you could always discard it.

Although detailed, your reviews can never give as much information about a game as a demo can and, after all, several commercial companies have released demo disks of biggies before.

Stuart Hardy
Wales
Sheffield, UK

The cost of cover disks for the UK edition would force the price up towards the £3 mark. And then you have the wastage that any multi-format magazine faces. However, we hope our demo directory which premiers in this (UK) issue will solve this problem.

Don't bug me

Thank you for recently printing my letter. I have now sold my ST and have a 20MHz 386DX which turns out to be just fast enough to run **Secret Weapons of the Luftwaffe** with the ground detail turned down, which is probably about par for the course.

As far as being amazed by the sight of 256-colour VGA goes, any sense of amazement is cancelled by the continual nagging doubt that the machine could be set up better for whichever game I'm playing.

I have also bought the excellent **ATP** and would like to know what the well known bugs I read about in your magazine are, apart from not managing to get the program to recognize the joystick when running the training routines.

B Dickens
Tyseley
Birmingham, UK

Don't go looking for bugs. They'll find you soon enough.

Burn rubber on me

I have just invested in a Sound Blaster card (v2) and am writing about some of the peculiar noises emitted from the speakers during adventures in various flight sims.

It was very generous of Sublogic to include'sound=adlib' for the CONFIG.ATP file from **Flight Assignment: ATP** in the manual, but where is the sound driver on the disks? Is this deliberate, or is the manual accidentally inaccurate? The sounds of the internal speaker aren't too bad, but I want to hear the burning rubber when my 747's wheels touch down. Is an updated version on its way, with digitized air traffic control speech, for example?

Moving on to **A10 Tank Killer, v1.5**, I have had considerable trouble with the sound selection part of the smart start program. I am unable to save the configuration with Sound Blaster selected, as the program reverts to Adlib synthesizer. I don't know what specific differences there

are in sound quality between the two boards, but as I have just forked out over £50 extra for the better board, I would obviously like the software set up properly. I am still in contact with Sierra about his problem, so hope I can get it all sorted out. I don't know if anyone at *SP* has come across this problem, but would appreciate any advice or suggestions.

On the subject of engine noise, has anyone hard of a silent tank? Those who created **Team Yankee** have – what happened to the engine noise?

If you activate extra smoke to come from the engine, surely you should be able to hear where the smoke's coming from? The explosions are quite accurate, but the silent operation makes the game completely unrealistic.

Finally, if you're really in a sadistic anti-American mood, **Secret Weapons of the Luftwaffe** has the answer. Take up an Me262 or whatever, armed to the teeth with rockets, and completely obliterate a squadron of B-17s single-handedly (choose unlimited everything beforehand). Then quickly turn around and start firing madly at the bailed-out crews' parachutes, and watch them pop like balloons. This has to be the best feature of the game – imagine the poor fellows hurtling to earth at 200mph with only the ground below to stop them. SPLAT! I have tried to shoot the parachutists themselves, but there doesn't seem to be any rewarding consequences. All harmless fun.

Another tip with **SWOTL**, even though it sounds suicidal, is when flying wingman in a B-17 formation, to leave the others and go it alone. I've found that if you dive sharply, at about 70 degrees to the horizontal, at the beginning mission, and level out at 500-1000ft (great skill is required to avoid crashing), the enemy fighters tend to concentrate on the main pack, which is usually 20 000ft above. Bombing tends to be more accurate, but it's best to forget the Norden bomb sight and do it manually – you can't really miss at that altitude.

The only disadvantage with flying low is losing height during turns (increase the throttle) and, if you do get attacked, the top turret gunner or tail gunner tends to run out of ammo, which leaves the plane very vulnerable. If you aren't too badly damaged, though, you can always climb and let the other gunners take the flak.

Paul Heaton
Formby
Liverpool, UK

*I contacted Dynamix about your problem but as yet it has not responded. If it does, look out for the reply in the next issue. Sublogic has brought out a supposed sound fix for **ATP**, but from all accounts it's hopeless and results only in increased static.*

Saved

I wonder if you could help me. I have an Amiga 500 (up to 1Mb) and have recently purchased **Their Finest Hour** and **Second Front** (SSI). Even following the instructions for setting up save-game disks, however, I find that I cannot save games and there are no instructions or prompts with either game.

Could you please explain to me how to accomplish the above.

V Walsh
Aylesbury
Buckinghamshire, UK

*Both these games requires disk formatted as **BOB** and **SF** respectively.*

Test match

I would like to set Amiga 1500 owners' minds at rest and correct a mistake made by one of your readers, a Mr TD Burge, whose letter appeared in issue 14.

Mr Burge suggested that Impressions' titles are not compatible with the Amiga 1500; this is not correct – indeed, many of our titles are developed on the Amiga 1500. It is company policy to test our games on as many versions of all computers as possible, and this certainly includes the Amiga 1500.

As a user of your magazine as well as an advertiser, I would also like to disagree with Mr Burge regarding the paper quality of the magazine, which I find more than acceptable.

David Lester
Managing Director
Impressions
London SW10 0XF, UK

Peak of perfection

Christmas comes but once a year, and so, I thought, did April Fool's day until you repeated your Twin Peaks spoof article – the one that tried to convince us we needed a couple of thousand pounds of computer to play a game, remember? The joke's the same, only the name has been changed – to **Wing Commander 2**.

Sluggish on a 16MHz 386? Needs a Sound Blaster board, not to mention a 20Mb hard disk all to itself? Seventy five minutes' installation? Several hours tinkering with files just to get the game to run at all? You've got to be kidding! In two pages you have summed up all the reasons why the PC is very much a minority computer in UK homes, and why that situation is unlikely to change very much in the future.

I've been agonizing for some time over the best way to upgrade from my elderly Archimedes A310, and believe it or not a lot of my thinking revolved around some form of 386 emulation, but no more. You have convinced me that simply plugging in an ARM3 processor and adding some memory to my old Archie will give me a computer that will knock spots off anything short of a 486 in terms of speed and ease of use at less than half the price.

Of course the shortage of games titles for the Archie is very sad, though the situation is now improving, but that's why I also own an Amiga.

Oh yes, my subscription renewal. Perhaps I'm as parochial as you consider TD Burge to be, but with the demise of the boardgame section, and the concentration of effort on PC games, issue 14 contained only three pages of reviews and a few paragraphs of news about strategy games available in formats compatible with my machines. I can't justify a subscription on that, although I will buy the occasional issue over the counter in the hope that your continual evolution of style will eventually lead back to something as exciting as I found the *Strategy Plus* issues of a year ago to be.

Stuart McNaughton
Abbey Wood
London SE2 0UY, UK

Blaming us for stringent machine requirements is like blaming the messenger for the bad news (in your case). Similarly it is not our fault if there is a proliferation of PC games in a given month that are not being ported to the Amiga. We happily cover Amiga games, but we cannot write about what we do not possess. If you or any other readers think we've missed covering a particular non-arcade title, then please let us know.

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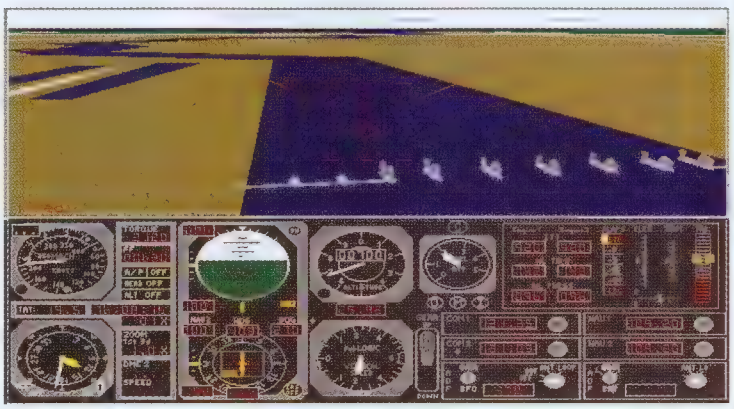
Great Britain Scenery Collection

Roger and in

By Steven Wartofsky



Designed by
Chris Manrique, Mike Woodley, Loren Kirkwood, Bill Mayhew, Holly Hardyman and Michelle Maase

Published by
Sublogic

Systems
IBM PC

Supports
16 colour VGA, EGA

Notes
Must be used with either **Flight Assignment: Airline Transport Pilot** or **Flight Simulator 4.0**

Once Microsoft/Bruce Artwick Organization's **Aircraft and Scenery Designer** came out for **Flight Simulator 4.0**, it may have felt to some like Sublogic's scenery disk days were near over. After all, users could design scenery in as much detail as their systems would handle, for their favourite areas, with incredible ease, right? And they could put together quite sophisticated runway and nav-aid placement configurations, right?

True enough. But Sublogic has cheerfully struck back with some significant advances in its new **Great Britain Scenery Disk Collection**. Most importantly, a new positioning engine has been included that allows the user to select, with incredible exactness, precise latitude and longitude numbers in order to locate the plane.

Almost as importantly, all the many airports and navigation aids in this three-disk set have been designed to function accurately within this latitude/longitude system.

These two advances combined make for one of the greatest opportunities to engage in and learn about precision flight navigation yet on offer in the realm of computer flight simulation.

A conversation a few years ago with Chris Manrique, one of the principal scenery designers at Sublogic, left me with some interesting insights. For one thing, he pointed out that not only were island geographies the most fun to design for, but that they were the most interesting to fly about. This is because of the wide variation in coastline that island terrain can provide: bays, harbours, inlets, cliffs, waterways, and peninsulas all proliferate.

Package deal

Chris also made clear that island geographies are generally much more intensively 'packed' with things like mountains, lakes, cities and villages, for obvious reasons. It thus becomes much easier to provide a realistically wide variety of terrain in a relatively small area, without stretching the user's credibility or damaging the correlation between the simulation and real-world conditions.

This logic is clearly evident in the great job Sublogic did relatively recently with its scenery disk for New England in the US; that region, though not an island, also contains a dense variety of features closely packed together in ways amenable to interesting flying.

It is, however, even more evident in **Great Britain Scenery Collection**; not only is the entire mainland as well as Ireland represented in full detail, but the surrounding smaller islands (Hebrides, Orkney, Shetland, Channel, Isle of Man, Isle of Wight) are included as well. The proximity of these islands to the mainlands makes it possible to test navigation skills via Instrument Flight Rules (IFR) to the limit, and provides room for extra excitement when, purely as a result of accurate plotting, the shores of an island first start to appear out the cockpit window.

The comparatively long history of the British Isles (at least compared with the US) also provides great opportunities for sight-seeing. Sublogic has seen fit in **Great Britain Scenery Collection** to provide an unusually large number of scenic attractions, ranging from things like the Thames Flood Barrier, North Sea oil rigs, and the Forth Bridge to Silverstone Raceway, Conwy Castle, and Liverpool Cathedral. London alone has at least 11 historic locations, each represented in good detail.

This complements more than 160 public-access airports, carefully designed and located in the collection. Both large, commercial runways and small, local fields have been included, each with exact longitudinal/latitudinal coordinates and elevations. All runways are supplemented by accurate, carefully drawn taxiways, and include appropriate markings and systems, depending on what's available at each airport.

The **Great Britain Scenery Collection** package includes some other significant new items to accompany the advanced scenery design. Perhaps most exciting are the three full-colour maps (one for southern England and Wales, one for Northern England and Wales, and one for Scotland, Ireland, the Orkneys and the Shetlands), all printed on high-quality paper. These new maps, like those provided with Sublogic's **ATP**, go well beyond just identifying runways, nav-aids and a few features. Going to colour means that the maps can now represent all the previous map features plus obstacles, city and town locations, uplands, mountainous ar-

eas, primary roads, ILS approach arrows, VOR compass roses, and major and minor aerodrome markers.

Superimposed on these wonderful details are accurately drawn latitude and longitude lines, as well as lines of equal magnetic variation. The longitude/latitude lines are drawn in one-degree increments, broken into divisions representing ten minutes of arc each. The magnetic variation lines provide the means to fly true magnetic courses, for both VFR and IFR purposes (those of you who have ever done any orienteering will understand what this is all about).

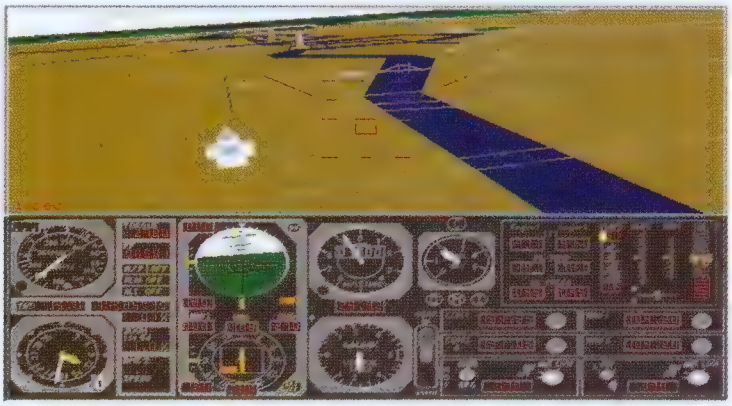
Each map correlates with one of the three scenery disks/files. Each of the three regions can be loaded separately, or either **ATP** or **Flight Simulator 4.0** can be set up to auto-load scenery as region boundaries are crossed. Though not on the included maps, the **Great Britain Scenery Collection** also includes unused territory extending as far south as Spain and as far east as Norway, promise we hope of good things to come.

Owing to the addition of the new longitude/latitude system, and the concomitant increased accuracy resulting from it, **Great Britain Scenery Collection** may interface somewhat oddly with Sublogic's own **Western Europe** scenery disk. Also, owing to intensive RAM usage, this new scenery may function strangely when all of **Aircraft and Scenery Design**'s auto-loading features are turned on. Apparently **ASD** 'looks' for scenery every 15 seconds or so, and with **Great Britain Scenery Collection** this causes a momentary but annoying halt in the simulation, regardless of CPU speed. The problem is easily resolved by turning off the static and dynamic scenery loading in **ASD** when using the new scenery with **Flight Simulator 4.0**.

This brings up an interesting point: I would highly recommend using the **Great Britain Scenery Collection** with Sublogic's own **Flight Assignment: Airline Transport Pilot**. Not only does the scenery interface without the above-mentioned problems, but it proves to be more detailed. Both runway markings and scenery items are provided in the **ATP** version of the scenery that aren't present in the **FS4** version. I don't know whether this is a marketing move on Sublogic's part, or simply the result of the fact that the company knows how to integrate its scenery with its own software at this point better than it does with MS/BAO's, but it's definitely worth taking note of. The scenery remains as functional with **FS4** as it does with **ATP**, in any event.

The **ATP** Shorts 360 is the best jet to tour the minor aerodromes with, of course (at least at present – Sublogic has new flight simulation software in the works that will model some other planes, the T-37, T-38 and F-16 in particular, all of which will work with this scenery). Landing on any of the smaller runways with a 747 is a rather frightening prospect.

Finally, a little cardboard flight plotter cum computer is included, which makes working with the equal magnetic variation lines possible. Included on the plotter are navigation tables plotting time to distance (in nautical miles) for timing approaches, a distance scale (for using with the maps), an indicated airspeed to true airspeed conversion factor table, a mach speed–airspeed conversion table, and a wind correction angle table for use when trying to plot a course against various wind angles. Just a piece of cardboard, but perhaps one of the handiest devices possible for advancing your control over your flight and route planning while using **ATP**.



FS4 interface

Since perhaps I seem a bit like a pollyanna these days (blame the Editor), I should make note of a few weaknesses in the design. First of all one would have hoped that **Great Britain Scenery Collection** would interface better with **FS4**.

Second, this scenery provides a potentially vast opportunity for all the people out there using **Aircraft and Scenery Designer** with **FS4**. But the 15-second hitches in the simulation make using **Great Britain Scenery Collection** with **ASD** nigh impossible to enjoy, which is a shame, particularly because many of the airports aren't anywhere near as populated with the buildings, vehicles, other airplanes and dynamic scenery we've come to take for granted as included with even **FS4**'s default scenery. I was particularly shocked when trying to line my little Cessna up at Heathrow to find that there was nothing but a large, gray splotch on the overhead map to indicate that Heathrow exists; out-the-window views from the plane show nothing but horizon.

Nevertheless, I have to end in pollyanna mode again. Let me just provide a brief reason why: after loading **Great Britain Scenery Collection** for the first time, I decided (via **ATP**) to try to set up a brief night approach to Cardiff. I checked the latitude and longitude coordinates on the map, entered them into the program, set up my altitude and heading, and started up the simulation. Lo and behold, I was right there, ten miles out from the runway, almost lined up, and a few key taps had me locked onto the ILS for Runway 120 for a clean, smooth final approach and landing in the Shorts 360. This would not have been possible before with the old coordinate system, and even with **Instant Facilities Locator** (or Sublogic's **New Facilities Locator**) things were never this smooth.

Being able to use a real-world coordinate system so precisely and simply adds immeasurably to the sense of realism, and to the user's confidence in the reliability of the simulation. This cannot be overemphasized. Work apparently proceeds apace on an equivalent set for California, USA. Sounds like surf's up in the world of serious, Instrument Flight Rules flight planning again. ❑

ACES OF THE PACIFIC

Paul Rigby on Dynamix's follow-up to Red Baron

Every war and battle therein has its element of 'character', that is memories and symbols which epitomize that conflict. For example, the Battle of the Bulge evokes the image of the tank, while Vietnam elicits pictures of dense jungle, napalm and SAMs.

The Pacific War, on the other hand, summons thoughts of mighty warships, carrier-based aircraft and fearful island-hopping confrontations: thoughts of the five battleships that were lost at Pearl Harbour, tearing the heart from the US Pacific Fleet; or of the wreckage of the American and Japanese forces during the conflict known as the Battle of the Coral Sea; or thoughts of the death knell to the Japanese Navy, when it lost four carriers, 322 planes and 3500 men just off the US-held island that bore the great battle's name – Midway.

One successful flight simulation has already attempted to replay the historical events that took place in the Pacific. Lucasfilm's **Battlehawks** took the role of a combat simulator that sought to simulate the chaos of the Pacific battles themselves. Now Dynamix hopes to extend and widen that brief. With **Aces of the Pacific** it aims to create a simulated conflict encompassing a multitude of aerodynamically correct aircraft flying accurately designed missions over realistic terrain, and undertaking a lengthy campaign that will span the whole Pacific conflict.

Flight simulation fans can bank on this being a winner purely because of this game's illustrious predecessor – the magnificent **Red Baron**. **Aces**, reportedly, will build on the **Red Baron** system, enhancing and adding to it in the hope of modifying the game to meet the increased competition in 1992.

Director of marketing Jerry Luttrell divulged what the basic improvements will be: 'There are more airplanes, and they will be more detailed because the planes have much more instrumentation than in Red Baron. The flight models have been improved, the enemy intelligence has been improved and the 3D graphics have been dramatically improved. The details in the cockpit too. We have increased the speed of 3-Space [the in-house 3D system] to the point where there are a lot more curved pieces that cover up the 3D, grids and struts.'

Wing dings

Garoud shading has also been added to enhance realism and provide detail to ordinarily coarse polygons. The 3-Space system has not yet, though, advanced to the point where the bit-mapped shapes can be rotated. Which is why, when seen outside of the cockpit, an attractive bit-mapped wing will be observed but, in an external view, the polygon wing reappears.

The player will be able to fly alongside and in one of, at the last count, 36 aircraft, each with its own flight model and its own set of cockpit graphics (such as P26, P36, Tigercat, Bearcat, Shinden and Zero).

The player will also be able to pilot aircraft with rear gunners. This helpful chap is, at the moment anyway, computer-controlled only. However, he will improve (in his intelligence and accuracy) with combat experience as progress is made during a campaign; equally, he can be killed. When he is dispatched the player will be able to see him slumped over his guns.

Experience in combat means that superior aircraft will be available. In addition, as in **Red Baron**, a personal choice of an aircraft to fly in combat can be made once the long ladder of rank is climbed to a pre-determined level.

A mixture of different aircraft can be flown during missions that will result in co- ordinated attacks. No bombers can be flown, however.

Baron period

Other improvements include the artificial intelligence, which, according to Luttrell, 'is an enhancement of what we did in **Red Baron**. We have taken the intelligence and flight models that we used in **Red Baron** and refined them. I don't think that it will be a light-year jump because **Red Baron** was actually pretty good. However, the designers have fine-tuned the systems. We learned a lot in **Red Baron**. So much of the knowledge we gleaned from that has gone into **Aces**.'

The mission structure will be the same as **Red Baron** in that there are a variety of missions such as air-to-air and air-to-ground, plus a campaign (which cannot be influenced) and so on. The player will be able to interact, via radio messages, with other aircraft and ground forces. The exact interpretation of the

contact has yet to be decided. However, there may be carrier ground crew, for example, who signal for take off, aid the in landing procedure and so on.

'We have been photographing individuals for the crew who are signalling when you are taking off from the carrier,' said Luttrell.

Dopple your money

Dynamix has included a Doppler effect that offers a more exact spacial sound effect and provides a positional clue to where the sound is coming from.

'We had that in **Red Baron**, sort of,' commented Luttrell. 'But that wasn't really a Doppler effect, it was just that sound got softer and louder as things got nearer and farther away from you. This is the real thing in **Aces**.'

One of the main additions within **Aces** is the add-on modules option. This allows Dynamix to plug in fairly substantial changes in the event of revisions or additions, although there is no information about any plans for such modules. Prime candidates, though, would be a mission creation system and, I would have thought, modem play.

Other modules could consist of extra aircraft and or scenery. There are even rumours of being allowed to fly the Australian side complete with aircraft (Wirraways and Boomerangs?) – anything goes really, as all of the relevant hooks will be included.

In the package Dynamix hopes to include 270-page plus manual that will have 35-pages of colour, plus a full colour wall-map. Incidentals such as the medal screen has been improved.

'A photo album replaces the medal screen,' says Luttrell, 'so you flick through this album and your picture is within, with medals and awards that you have won pasted to it.'

The end of the war coincides with the beginning of the Bomb. At the time of writing it was not known just how Dynamix would treat this potentially sensitive subject (*thanks for not saying 'explosive' – Ed*).

Mirror image

It is possible that the end sequence may mirror that of **Red Baron** and display a number of newspaper headlines, but nothing has been decided yet.

Aces of the Pacific is arriving on the crest of the wave stirred up by **Red Baron** and will be, no doubt, the cause of much finger-tapping on computer desks in impatience until its arrival *(tap, tap, tap, – Ed)*. ❑

COMMANDER CRUNCH REPORTS FROM THE HANGAR

Commander Crunch does a turn

Things seem to have eased up some in the onslaught of new flight sims (and there's about a year's worth of play minimum in the average sim these days), so the Commander's going to sit back for a bit and trade a few stories with y'all, or maybe, better yet, a little deep technical expertise, gleaned from the pages of his dog-eared library.

I know shooting things down seems like a whole lotta fun, but let's talk about civilian flight anyways. Some interesting tiny details about the way **FS4** works. First off, flying the Cessna 182, in general throttling 'er back to below 1200rpm initiates a descent, and powering up to more than 1200rpm causes ascent, when done from level flight. Along the same lines, if auto-coordination is on, and you hit the ailerons ever so slightly, you'll notice a tiny slip prior to the bank as you start a turn (this may vary depending on the speed of the CPU). What's a slip? It's a horizontal move without bank, which involves yawing.

A severe yaw can be caused by an uncoordinated turn, that is a turn in which the amount of rudder and ailerons applied is unbalanced, resulting in rotation of the plane around a horizontal axis (in other words if you stuck the plane in the middle with a giant pin, like you would a butterfly for Nabokov's collection, you'd be turning it clockwise or counterclockwise without enough bank for it to continue flying straight). This is called adverse yaw and is an effect primarily induced by the ailerons. The rudder should ideally be thought of primarily as a device for correcting this adverse yaw, no more, according to Langewiesche.

Turned up nose

Uncoordinated turns are usually bad things, as the plane is now heading, say, 360 degrees north on the compass, but the nose may be turned to 3 degrees east of north (well, I exaggerate for effect). Not only does this apparently feel like being cross-eyed, but it means that one wing is moving into the airstream sooner than the other, thus unbalancing lift and causing the forward-most wing to rise and the lagging wing to drop (hey, a bank! we're back in shape!).

But a little uncoordination can be a good thing when making an approach to runway, especially if there's a crosswind. Getting uncoordinated in **Flight Simulator 4.0** means buying yet another joystick, and having a joystick card with two ports (or finding a joystick y-connector splitter cable, which is equally effective). No commissions here, but CH Products' little Mach III is an ideal second joystick, as not only is it inexpensive, but it allows the disabling of the springs on the y axis, which is important for using the second stick as an analogue throttle control, as well as using its x-axis for rudder control.

Stick at it

With two sticks plugged in, and **FS4** auto-coordination turned off, interesting things start to happen. First, a little push right or left with the second stick (rudder) will cause the 'ball' in the lower leftmost gauge to start bouncing around. This is the horizontal equivalent of the porpoising the plane does (when full realism settings are on) in the vertical when changing altitude via either throttle or elevator. The plane will eventually come back to centre.

The goal with two sticks is to coordinate the push of the rudder over with the equivalent movement of the ailerons, so that a smooth, banking turn can take place. Wolfgang Langewiesche, in his excellent *Stick and Rudder* (McGraw Hill, ISBN 0-07-036240-8), makes the very useful point that the rudder should only be considered a kind of compensation after the bank, instead of a device used itself to initiate the turn.

In other words, start the turn using two sticks by, say, pulling right on the ailerons to initiate bank, and then pulling on the rudder stick just enough to keep the turn smooth. To get the best feel for this, go nuts and get the Maxx Pedals, which provide even more realistic rudder control.

When coming in for a landing, if only slightly off the ILS needles (one should always think of flying towards the needles if they're at all off-centre, an easy enough concept to grasp), use the rudder to produce just a little yaw to slip sideways and get more perfectly lined up. Do this by pulling the rudder in the opposite direction you normally would to make a turn. This might all sound maddeningly complex at first, but with practice in fact two sticks make landings much easier than they are with the

auto-coordination turned on, especially in adverse weather conditions.

With all that under your belt, remember a few important rules about handling the Cessna. First, use the throttle to increase or decrease descent rate. Yup! Not the elevators; ideally on a perfect approach to landing you shouldn't need to touch the elevators or elevator trim controls until you're 50 feet off the ground and ready to flare. The elevators are used to change aircraft speed. Pulling up on the elevators will increase the wings' angle of attack, initially increasing lift but ultimately causing the plane to drop faster than previously, at a slower indicated airspeed (cf Langewiesche, p242). Think of the elevators as incapable of adding any extra energy to the path of flight, only of funnelling the plane's total kinetic energy towards lift at expense of forward motion or vice versa. Oddly enough, pushing the plane's nose down is most likely to extend the amount of horizontal territory covered.

Increasing throttle alone will initially increase IAS, thus increasing lift and furthering the length of the plane's glide into the runway without causing as radical a change in the wings' angle of attack, and vice versa. However, after the first few moments, changes in the throttle setting will ultimately not affect airspeed so much as rate of climb or descent.

Second, anticipate turns you'll need to make. When you first see a runway you've used your NAV instruments to fly to (I can't overemphasize the added satisfaction that comes from learning to use IFR – read the manual carefully on this, instrument flying is 80% of the fun to be had with **Flight Simulator 4.0**), don't come in straight for a landing

Time check

Plan to fly over the runway, or better yet, slightly diagonally across it, and then loop around to make the final approach from the end opposite to the one nearest you (think of this as doing a kind of backwards, bulbous capital P, starting at the lower part of the P's loop). This gives you time to check out the runway and local traffic, and more closely emulates real-world approach patterns.

Third, set zoom to 2x when you are on final approach, if you feel in enough control of what's going on; this gives you a less wideangle view of the situation, and more closely reflects what you might really see out the window, which is important for one reason: checking the perspective of the runway is a good indicator (especially if there's no ILS) of the potential success of your descent (again, see Langewiesche on this). If the runway's too square-looking, you're too high and likely to overshoot; if it's radically foreshortened, you're too low and at best will have a shallow, risky glide. Somewhere in between is just perfect, and easiest to judge at 2x zoom (thanks to Rick Lee for this very useful tip on using zoom).

Flight plan

Finally, some comments on instruments. First, make out a flight plan using the maps for the area you're flying in. Set the first VOR on NAV1, the second on NAV2, and once you're flying towards NAV2, if there's a final VOR or ILS reset NAV1 for that well before you start to get near it. Also don't forget to decide on and plot out the approximate heading you will be flying on, and use the OBS to set that heading on the VOR Indicator. Get a clear sense of what the markings off-centre for the Course Deviation indicator needle mean; one notch off-centre requires only a few compass degrees of correction (again, fly towards the needle), maybe 2-3 degrees; two notches off-centre means more like 5-7 compass degrees change from your previous course; and far off to the right or left might require up to a 10 degree change in heading. Feel free to tune in other VORs along the route along with the planned ones (especially if they're VOR/DMEs), to get a quick check-up on where precisely along the route (using the map) you are at any moment. Depending on these VORs' relation to your route, the needle in the NAV instrument is likely to be all the way off to one side or the other, but that's OK, you just want a general sense of whether the VOR is to the right or left of you.

To turn back briefly towards the more bellicose arena of air combat, here's a nifty extract from a short story picked up from Robert Johnson's *Thunderbolt!* by way of Shaw's *Fighter Combat* (as discussed last month):

'Habit brought my head swivelling around to look behind me. I was just in time to see a Focke-Wulfe bouncing, nose twinkling from the .30-calibers. My left hand slammed forward on the throttle, my right hand hauled back and left on the stick, my heart went to the top of my head and the Thunderbolt leaped upward. I racked the Jug into a tight left climbing turn, staying just above and in front of the pursuing Focke-Wulfe... To get any strikes on me the [pilot] first had to turn inside me, and then haul his nose up steeply to place his bullets ahead of me. The Focke-Wulfe just didn't have it. At 8,000 feet he stalled out while the Thunderbolt roared smoothly; I kicked over into a roll and locked onto his tail.'

Try this in both **Secret Weapons of the Luftwaffe** and **Chuck Yeager's Air Combat** if you have them, and see whether they live up to the details of the above scenario. The closer either design comes to approximating what happens in Johnson's description, the more historically realistic the simulation. There's nothing like this kind of comparison to put the player right into the middle of the actual history, and such comparative testing can provide a real feel for the particulars of a plane's performance.

Good luck. Over and out. ❑

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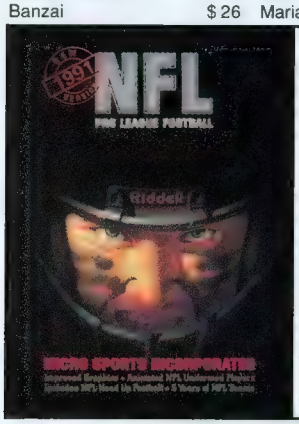

'NFL PRO LEAGUE FOOTBALL' from **MICRO SPORTS INC.** is a strategic football game. You take the field with 2 billion different play combinations. Features include animated uniformed players, weather conditions, true modem head-to-head play, 5 years of teams with real players names & data, a stats keeper with 140 different categories, and a challenging computer coach to play. **$49**

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'PLANET'S EDGE' from **NEW WORLD** is a save the Earth sci fi roleplaying game. Track down a missing Earth & return it to its own place & time. Explore dozens of solar systems featuring unique inhabitants & environments. Design your own space ship. Features puzzles with multiple solutions, 3D perspective, strategy or real time combat, 256 color VGA & sound board support. **$38**

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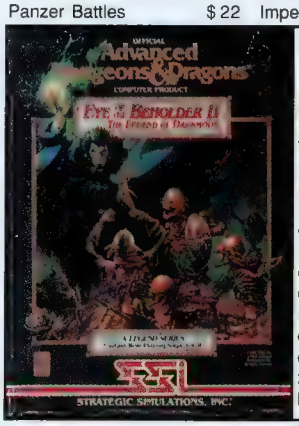

'EYE OF THE BEHOLDER 2' from **SSI** is a first person role playing game. A bigger adventure including forests, a temple, catacombs, and three huge towers. There are more people to meet, clues to learn, an improved point and click interface, and lots of newer, smarter, and meaner monsters. More complex non-player characters. Features 256 color VGA & sound board support. **$38**

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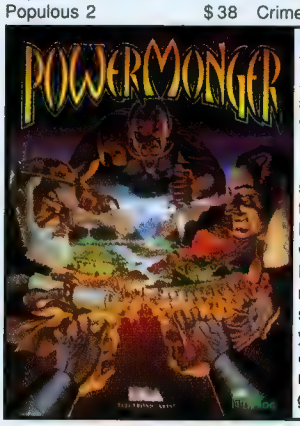

'POWER MONGER' from **ELECTRONIC ARTS** is a unique strategy game. A living world with forests, mountains, waterfalls, rivers, towns, farmers, shepherds, merchants, fisherman, weather, homes, jobs & NPCs with individual identities. Plan, produce, invent, negotiate, bribe, recruit subordinates, & feed your people. 3D zoom & rotate, play by modem, random maps & great graphics. **$34**

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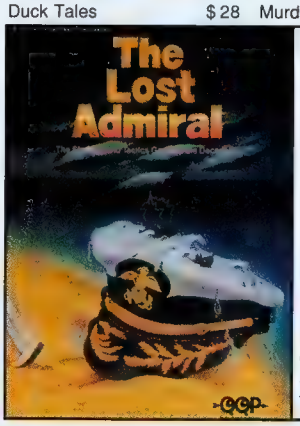

'LOST ADMIRAL' from **QUANTUM QUALITY PRODUCTIONS** is a turn based production naval strategy game. Features 9 scenarios, a random map scenario, 15 campaign games, flagships with special abilities, very strong artificial intelligence, in depth officers ranking system, accumulates your career history as you play, 2 player option, and sound board support. In short better than EMPIRE. **$34**

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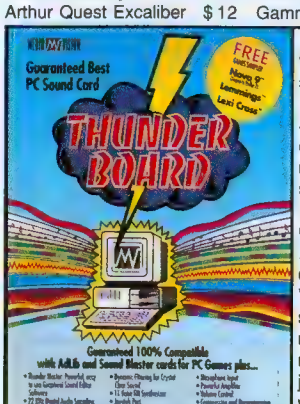
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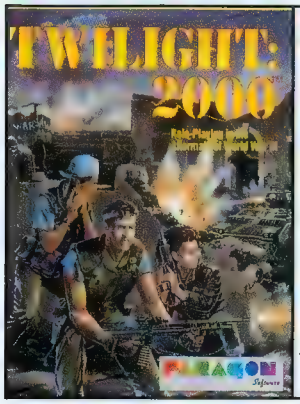
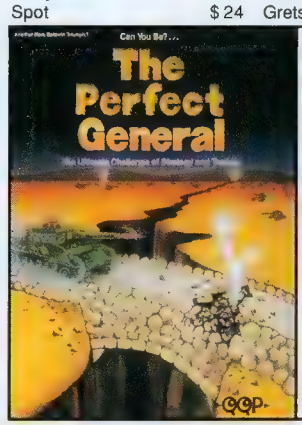


'TWILIGHT 2000' from **MICROPROSE** is a roleplaying game set in the aftermath of **WW3**. Test your leadership skills by commanding a squad of 20. Features individual motivations, values & moral code, 50 attributes/skills, 60 careers, overhead 3D outdoor views, detailed 3D military vehicle simulators, masses of vehicles, weapons, & explosives to kill & maim with. 256 color VGA, adlib support. **$34**



'PERFECT GENERAL' from **QQP INC** is a turn based ground war game. Features 12 years of play testing, great maps in VGA, easy to use mouse or keyboard interface, 14 scenarios, very strong artificial intelligence, hidden movement, line of sight option, in depth player ranking system, saves your career history as you play, 2 player option, modem play, sound board support. **$34**

'STRIP POKER 3' from **ARTWORX** is a poker game for adults. It combines the strategic play action of 5 card draw poker with very unusual table stakes. Pit your skill against Laura, Greta, and Kami, each have their own style and personality. Includes digitized VGA graphics, simultaneous play against up to three opponents, digitized speech, and mouse support. 4 Data Disks available. **$31**

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Pete Rose Baseball	$ 9
PGA Tour Golf	$ 32
PGA Tour Golf Disk 1	$ 17
PGA Tour Golf Ltd Edt	$ 45
Pro Football Analyst	$ 34
Pro Tennis Tour 2	$ 32
RBI 2	$ 32
Reel Fish'n	$ 12
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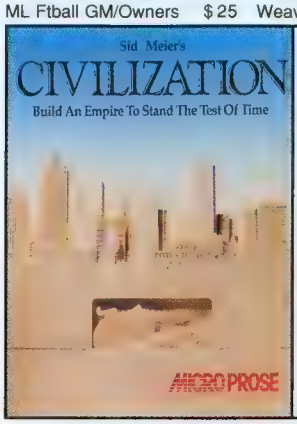
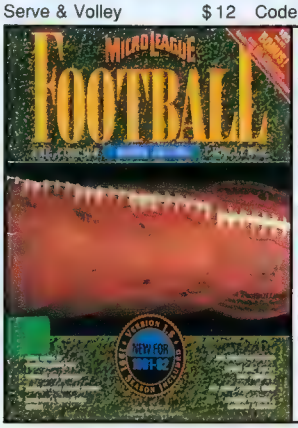
Serve & Volley	$ 12
Skate or Die	$ 16
Skie or Die	$ 16
Speedball 2	$ 27
Sport of Kings	$ 18
Super Car Pack	$ 37
Tennis Cup	$ 32
Tie Break Tennis	$ 27
TKO Boxing	$ 6



'CIVILIZATION' from **MICROPROSE** "is a competitive multi-player strategy game with a great deal of replayability" **CGW**. You explore cities, continents, and the world in an **EMPIRE** like way. You make economic decisions prioritizing technological growth in order to advance your civilization more rapidly than the other players. The best of both **SIMCITY** & **EMPIRE**. **$39**

'CARRIERS AT WAR' from **SSG** is WW2 carrier warfare. Explore Pearl Harbor, Santa Cruz, Coral Sea, Midway, Eastern Solomons, & Marianas Turkey Shoot. Great graphics and simulation. You must seek out the enemy carriers, fleets and aircraft before they find you. Hundreds of ships & aircraft are individually modeled. With point & click interface, 256 color VGA & sound board support. **$37**



'MICROLEAGUE FOOTBALL DELUXE' from **MICROLEAGUE SPORTS** is a realistic football simulation. You get 48 pro football rosters that you can form into leagues of up to 28 teams. Single-key playbook macros let you program plays for faster play. The computer coach picks offensive & defensive plays based on actual team stats and player stats, adjusting his game plan to your every move. **$39**

IBM SPORTS

Tom Landry Football	$ 29
Tony LaRussa Basebll	$ 32
T LaRussa Stadiums	$ 15
T LaR Teams1901-68	$ 15
TV Sports Basketball	$ 12
TV Sports Football	$ 12
Weaver Baseball 1.5	$ 19
Weaver Commissioner	$ 16
Weaver 1988 - 1989 Ea	$ 16
Weaver Baseball 2.0	$ 32
Weaver Commisnr 2.0	$ 21
Weaver 2.0 1990 Teams	$ 16
World Class Soccer	$ 28
1990 Stats/Mngr Profils	$ 16
Weaver 2.0 Comm Edt	$ 59

HINT BOOKS

688 Attack Sub	$ 10
Altered Destiny	$ 10
Bard's Tale 1 - 3 Ea	$ 10
Buck Rogers 1 or 2	$ 10
Castle of Dr Brain	$ 10
Champions of Krynn	$ 10
Code Name Iceman	$ 10
Colonel Bequest 1 or 2	$ 10
Conquests of Camelot	$ 10
Conquests of Longbow	$ 10
Countdown	$ 10
Curse of Azure Bonds	$ 10
Death Knights of Krynn	$ 10
Dragons of Flame	$ 10
Drakkhen	$ 10

IBM AD & D

AD&D Bundle	$ 38
Champions of Krynn	$ 32
Curse of Azure Bonds	$ 32
Death Knights of Krynn	$ 32
Dragon Strike	$ 32
Dragons of Flame	$ 12
Eye of the Beholder	$ 32
Eye of the Beholder 2	$ 38
Gateway Savge Frontr	$ 32
Heroes of the Lance	$ 12
Pool of Darkness	$ 38
Pool of Radiance	$ 32
Secret of Silver Blades	$ 32
Shadow Sorcerer	$ 32
War of the Lance	$ 9

HINT BOOKS

Elvira 1 or 2	$ 10
Eye of Beholder 1	$ 10
Eye of Beholder 2	$ 12
Fountain of Dreams	$ 10
Free DC	$ 10
Gateway Savage Frntr	$ 10
Hard Nova	$ 10
Harpoon Battlebook	$ 19
Heart of China	$ 10
Hero's Quest 1 - 3 Ea	$ 10
Immortal	$ 10
Indy Jones Lst Crsade	$ 10
Indy Jones Fate Atlantis	$ 10
King's Quest 1 - 5 Ea	$ 10
Leisr Suit Larry 1 - 5 Ea	$ 10
Loom	$ 10
Lord of the Rings 1 or 2	$ 10
Magic Candle 1 or 2	$ 10
Manhunter NY or SF	$ 10
Maniac Mansion	$ 10
Martian Dreams	$ 13
Martian Memorandum	$ 10
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Might & Magic 1 or 2	$ 10
Might & Magic 3	$ 16
Planet's Edge	$ 16
Police Quest 1 - 3 Ea	$ 10
Pool of Darkness	$ 12
Pool of Radiance	$ 10
Power Monger	$ 10
Puzzle Gallery	$ 10
Quest for Clues 2, 3 or 4	$ 21
Quest for Glory 1 - 3 Ea	$ 10
Railroad Tycoon	$ 10
Rise of the Dragon	$ 10
Run.5 Issue 1 - 20 Ea	$ 6
Savage Empire	$ 10
Search for the King	$ 10
Secret Mnky Islnd 1 or 2	$ 10
Secret of Silver Blades	$ 10
Shadow Sorcerer	$ 10
Simcity/Simearth	$ 20
Simearth	$ 19
Space Quest 1 - 4 Ea	$ 10
Starflight 1 or 2	$ 10
Strategy Plus 3 -11 Ea	$ 8
Strategy Plus 12-16	$ 4
Tunnels & Trolls	$ 10
Ultima 4 - 7 Ea	$ 10
Wizardry 6 Cosmic Frg	$ 12
Wizardry 7 Crusade	$ 12
Yeager's Air Combat	$ 19
Zak McKracken	$ 10

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Ad Lib Gold Snd Crd	$199
Adlib Surround Sound	$59
Adlib Telephone Module	$59
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Ad Lib Speakers	$15
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Flight Stick w Falcon	$46
Maxx Control Yoke	$59
Rudder Peddals	$39
Mouse 3 Button	$29
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Sound Blaster	$109
Sound Blaster Pro	$199
Snd Blaster Speakers	$15
Snd Blaster Voice Edtr	$54
Sound Star Snd Board	$29
Thrustmaster Joystick	$79
Thrustmstr Weapn Cntrl	$79
Thunder Board SndBrd	$84
Thunder Board Spkrs	$15

IBM ROLE PLAYING

2400 AD	$28
Autoduel	$26
Bad Blood	$31
Bard's Tale 1	$15
Bard's Tale 2	$19
Bard's Tale 3	$31
Bard's Tale Cnstrctn St	$34
Battletech 1 or 2	$31
Blade Warrior	$12
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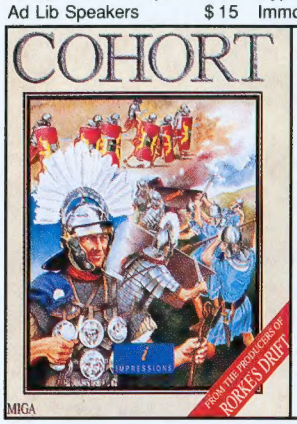
Elvira 2 Jaws Cerberus	$42
Escape from Hell	$17
Fire King	$7

IBM ROLEPLAYING

Flames of Freedom	$29
Fountain of Dreams	$15
Hard Nova	$19
Hero's Quest 1	$21
Hero's Quest 2 or 3	$34
Hyperspeed	$37
Immortal	$27



'COHORT' from **IMPRESSIONS** is an unusual wargame using a miniatures style interface to cover combat between roman legions & their enemies. Features animated combat & movement, 7 unit types, infantry, cavalry, & archers, user definable army composition, 4 different maps, scenario builder, stop & give orders real time combat, 256 color VGA, & sound board support. **$34**

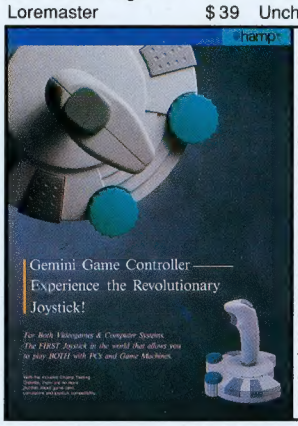
Journey	$12
Keef the Thief	$16
Keys to Maramon	$19
King's Bounty	$19
Knights of Legend	$30
Lord of the Rings 1	$34
Lord of the Rings 2	$37
Loremaster	$39
Magic Candle 1	$15
Magic Candle 2	$38
Mechwarrior	$34
Megatraveller 1	$19
Megatraveller 2	$34
Megatraveller 3	$37
Midwinter 1	$24
Midwinter 2	$29

'FINAL CONFLICT' from **IMPRESSIONS** is a strategy game of power politics & global warfare. Allocate resources. Build factories and control food production. Produce armies, tanks, ships, & missiles. Send out spies & conduct diplomacy to uncover military secrets & win allies. Features 95 countries, nuclear winter, optional arcade missile sequence, entirely icon driven. **$34**

Might & Magic 1	$12
Might & Magic 2	$17
Might & Magic 1, 2&HB	$33
Might & Magic 3	$38
Mines of Titan	$12
Murder	$29
Paladin	$28
Paladin Scrolls Disk	$16

IBM ROLEPLAYING

Phantasie 3	$12
Pirates	$9
Planet's Edge	$38
Prophecy 1	$12
Questron 2	$12
Rings of Medusa	$28
Scavengers	$34
Sentinal Worlds	$18
Shadowgate	$31
Sorcerian	$34
Space 1889	$19
Space Inc	$34
Space Rogue	$30
Space Wrecked	$32
Spirit of Excaliber	$29
Starflight 1 or 2	$19
Star Command	$34
Star Saga 1 or 2	$34
Sword of the Samurai	$9
Swrd Samrai & Pirates	$16
Tangled Tales	$21
Terran Envoy	$12
Third Courier	$9
Times of Lore	$28
Tunnels & Trolls	$12
Twilight 2000	$34
Ultima Martian Dreams	$37
Ultima Savage Empire	$34
Ultima Trilogy	$35
Ultima 4 or 5	$35
Ultima 6 False Prophet	$39
Ultima 7 Black Gate	$45
Ultima Stygian Abyss	$48
Uncharted Waters	$42
Vengeance of Excalibur	$32
Windwalker	$28
Wizardry Trilogy	$32
Wizardry 4	$19
Wizardry 5	$32
Wizardry 6 Cosmic Frg	$37
Wizardry 7 Crusaders	$39



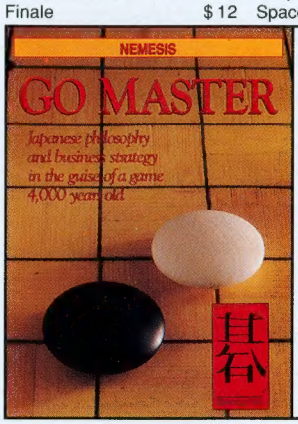
'GEMINI JOYSTICK' from **A DAN AMERICA** is the first joystick for videogame machines and PCs. A Champ testing disk is included for checking PC configuration. Features include dual-axis trim adjusters for accurate and stable cursor control, high speed autofire, and auto-centering. One joystick switches between PC or the following: Turbo Grafx 16, Genesis, or Nintendo. **$24**

IBM ACTION /ARCADE

Airborne Ranger	$12
Altered Beast	$28
Amazing Spiderman	$12
Arachnaphobia	$28
Arkanoid 2	$28
Armor Alley	$27
Artura	$6
Back to the Future 2	$24
Barbarian	$9
Batman	$28
Batman The Movie	$24
Battle Master	$37
Battlestorm	$32
Bill & Ted's Excllnt Adv	$19
Blockbuster	$6
Blockout	$28
Brain Blaster	$28
Bruce Lee Lives	$28
Budokan	$17
Colorado	$9
Continuum	$32
Crackdown	$19
Crossbow	$29
Dark Century	$29
Day of the Viper	$32
D Generation	$32
Dig Dug	$6

IBM ACTION /ARCADE

Double Dragon 2	$15
Dr Doom's Revenge	$12
Dragon's Lair 1 or 2	$38
Drgn's Lair Singe Cstl	$37
F40 Pursuit	$31
Faces Tetris 3	$25
Finale	$12
Fire Power	$24
Freakn Funky Fuzzballs	$19
Galaxian	$6
Gauntlet 1 or 2	$9
Ghostbusters 2	$12
Golden Axe	$19
Gold of the Aztecs	$29
Grave Yardage	$12
Gremlins 2	$12
Guy Spy	$32
Harmony	$29
Hard Driving 2	$38
Home Alone	$27
Indy Jones Lst Crsade	$19
Knight Force	$31
Last Ninja 2	$24
Lemmings	$32
Light Quest	$32
Living Jigsaws	$9
Loopz	$24
Marble Madness	$15
Mavel Trilogy	$39
Miami Vice	$28
Monty Python	$15
Ms Pac Man	$9
Nevermind	$25
Night Breed	$15
Night Hunter	$25
Night Shift	$19
North & South	$27
Nova 9	$26
Obitus	$34
Obliterator	$6
Oil's Well	$21
Pac\ Man	$9
Paperboy	$27
Pick N Pile	$28
Pinball Construction	$9
Pipe Dream	$19
Powerdrift	$25
Powerdrome	$12
Psychic War	$28
Punisher	$12



'NEMESIS GO VER 5' from **TOYOGO** is the ultimate computer GO program. With the simplicity of checkers and the complexity of chess, GO is both an enjoyable recreation and a serious strategy game. GO MASTER is a basic GO player and tutor. JOSEKI GENIUS adds complex corner openings. TACTICAL WIZARD is the ultimate tutor offering in depth tactical analysis. GO is 4000 years old. **$39**

IBM ACTION /ARCADE

Resolution 101	$24
Rocketeer	$32
Rotox	$24
Savage	$25
Silpheed	$21
Simpsons Arcade Game	$32
Space Ace 1 or 2	$37
Space Harrier	$28
Space Wars	$37
Speedball	$12
Speedball 2	$27
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Stormlord	$15
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Taking of Beverly Hills	$27
Targhan	$28
Teenage Mtnt Nnja Trtl	$24
Terminator	$34
Thexder 1 or 2	$21
Treasure Trap	$10
Troika	$19
Vaxine	$24
Viking Child	$32
Volfied	$27
Welltris Tetris 2	$24
Wild Streets	$31
Wrath of the Demon	$37
Xenocide	$19
X Men 1	$9
X Men 2	$25

'DOLPHIN SAILING SIMULATOR' from **DOLPHIN MARINE SYSTEMS** is a realistic sailing adventure. You may choose from four different sailboats, raise or lower sails to adjust for wind conditions, view the area in cockpit or binocular view. Expand your system with the following voyage disks: San Francisco, Long Island, California, Vancouver, New England, Florida, Chicago. **$39**

'HYPERSPEED' from **MICROPROSE** is a combination 3D space combat simulator and roleplaying game. Pilot a complex starship armed with fighters, kamikaze ships, plasma canon and remote probes. Conduct deep space diplomacy, negotiate with dozens of alien races, make alliances and treaties, each alien race responds according to its own customs and hidden agendas. **$39**

IBM SIMULATION

688 Attack Sub	$19
A10 Avenger	$43
A10 Tank Killer	$26
A10 Tank Killer 1.5	$34
Abrams Battle Tank	$12
Ace of Aces	$15
Aces of the Pacific	$39
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ATAC	$28
ATP	$37
Battle Command	$24
Battlehawks 1942	$21
Blue Max:Aces WW 1	$12
Cardinal of the Kremlin	$27
Carrier Command	$12
Conqueror Multi Tank	$27
Crash Course	$12
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F16 Combat Pilot	$16
F19 Stealth Fighter	$39
F29 Retaliator	$34
Falcon	$34
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Falcon 3.0	$42
Flight of the Intruder	$32
Flight Simulator 4.0	$39
Aircraft Scenry Design	$35
Fly Grand Canyon 3D	$45
Galactic Conqueror Tank	$31
Gunboat	$33
Gunship	$12
Gunship 2000	$39
Harrier Combat Sim	$9
Heatwave	$25
Hoverforce	$31
Hunt for Red October	$22
Hyperspeed	$39
Instnt Facilities Locator	$28
Jet	$12
Jet Fighter 2.0	$39
Knights of the Sky	$29
LHX Attack Chopper	$26
Life & Death 1	$24
Life & Death 2	$32
Lightspeed 1	$29
M1 Tank Platoon	$39
Mantis Exprmntl Fghtr	$37
Mechwarrior	$34
Megafortress	$37
Megafortress Mission 2	$24
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Red Storm Rising	$12

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Silent Service 2	$34
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Strike Commander	$45
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Team Yankee 2	$32
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TD2 Callifornia Challng	$15
TD2 European Challng	$15
TD2 Muscle Cars	$15
TD2 Super Cars	$15
Test Drive 3	$32
TD3 Road & Car Disk	$19
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TFH & BH1942	$38
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Thunderhawk	$32
Thunderstrike	$39
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Tracon 2	$29
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AMIGA GAMES

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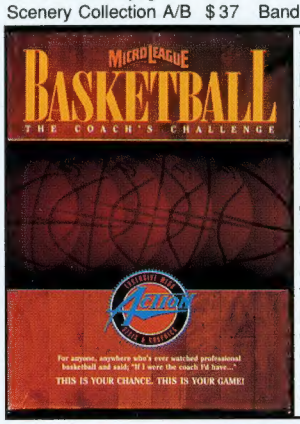
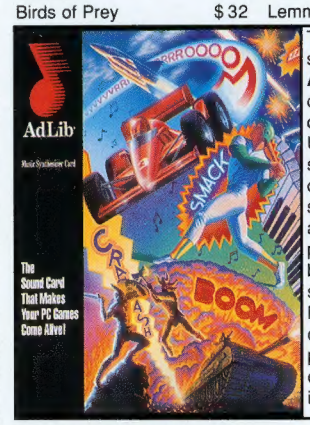
Bard's Tale 1	$18
Bard's Tale 2	$19
Bard's Tale 3	$34
Battlehawks 1942	$21
Battle Isle	$32
Battle Tank Barbarosa	$36
Battletech	$34
Birds of Prey	$32
Blue Max:Aces WW I	$34
Breach 2	$24
Breach 2 Scenario Disk	$15
Buck Rogers	$32
Centurion Dfndr Rome	$34
Champions of Krynn	$32
Code Name:Iceman	$24
Cohort	$34
Colonel's Bequest	$24
Command HQ	$39
Conan	$32
Conquests of Camelot	$24
Corporation	$32
Curse of Azure Bonds	$32
Days of Thunder	$34
Death Knights of Krynn	$32


MICRO LEAGUE
BASKETBALL
THE COACH'S CHALLENGE
For anyone, anywhere who's ever watched professional basketball and said: "If I were the coach I'd have..."
THIS IS YOUR CHANCE. THIS IS YOUR GAME!

'MICROLEAGUE BASKETBALL' from **MICROLEAGUE** is a realistic Basketball simulation. Features include full court scrolling graphics, pop-up screens for easy mid-game access to stats and substitutions, injury and fatigue factors, automatic stat compiler function, and a quick-play option. Expanded offensive & defensive options like, full court press, Double team, and Fast-Break. **$28**



The **'ADLIB'** music synthesizer card by **ADLIB INC** adds sound capability to hundreds of existing PC games. Using its 11 different FM synthesized voices, it can reproduce any sound. The standard audio jack allows you to plug in any headphone, boombox, or bookshelf speaker. The Adlib Juke Box playback program containing numerous pre-programmed compositions is also included. **$69**

'FIRETEAM 2200' from **SIMSYSTEMS** is a strategy game of armoured combat in the far future. Fight alone or command up to 16 armoured units. Over 30 diffferent vehicles with 25 different weapons systems. Features adlib support, 15 scenarios, hidden movement, campaign game, datalink reports from vehicles in your command, line of sight tactical display, and play by modem. **$29**

AMIGA GAMES

Dragon Force	$34
Dragon Strike	$34
Dungeon Master	$28
Elvira Mistress of Dark	$34
Empire	$33
Eye of the Beholder	$39
Eye of the Storm	$32
F15 Strike Eagle 2	$29
F19 Stealth Fighter	$39
F29 Retaliator	$34
FA18 Interceptor	$18
Falcon	$34
Falcon Mission Disk	$18
Fire Brigade	$35
Free DC	$34
Gateway Savage Frntr	$32
Genghis Khan	$37
Gettysburg:Turn Point	$37
Gunship	$34
Halls of Montezuma	$28
Harpoon	$37
Harpoon Battle Sets	$19
Harpoon Editor	$27
Heart of China	$34
Heatwave	$28
Hound of Shadow	$28
Immortal	$34
Imperium	$26
Indy Jones Adventure	$24
Kampfgruppe	$37
King's Quest 1 - 3 Ea	$29
King's Quest 4	$34
Leisure Suit Lrry 1-5Ea	$34
Lemmings	$32
Loom	$21
Lost Admiral	$34
Lost Patrol	$34
M1 Tank Platoon	$39
Manhunter NY or SF	$29
Megafortress	$38
Midwinter	$28
Might & Magic 2	$38
Might & Magic 3	$38
Nobunaga's Ambition	$37
Nova 9	$21
Nuclear War	$34
Overrun	$39
Perfect General	$34
Planet of Lust	$28
Police Quest 1	$29
Police Quest 2	$34
Pool of Radiance	$34
Pools of Darkness	$38
Populous	$34
Populous 2	$38
Powermonger	$34
Railroad Tycoon	$34
Red Barron	$34
Red Storm Rising	$30
Riders of Rohan	$39
Rise of the Dragon	$34
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Rorke's Drift	$34
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Sci Mutant Priestess	$31
Search for the King	$37
Second Front	$34
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AMIGA GAMES

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Spirit of Excaliber	$29
Star Control	$34
Starflight 1	$32
Starflight 2	$32
Storm Across Europe	$39
Team Yankee	$37
Their Finest Hour	$21
Thunderhawk	$32
To the Rhine	$36
Typhoon of Steel	$39
Ultima 4 or 5	$39
UMS 2	$39
Vengeance of Excalibur	$32
Wizardry Bane Cosmic	$39
Worlds at War	$29

MACINTOSH

Ancnt Art of War	$29
Ancnt Art of War Sea	$29
Armor Alley	$32
Balance of the Planet	$19
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Bttl Chess 2 Chinesse	$31
Carrier Command	$31
Castles	$34
Checkmate	$36
Citadel	$26
Crystal Quest	$29
Darwin's Dilemma	$32
Design Your Own Train	$32
Drgn Lair	$38
Drgn Lair 2:Time Warp	$38
Drgn Lair Esc Singe Cst	$37
Faces/Tetris 3	$25
Falcon	$34
Fast Break	$30
Go Master 5.0	$36
Grail Quest	$19
Harpoon	$39
Harpoon Challenge Pak	$59
Hoyle's Games 1	$21
Hoyle's Games 2	$21
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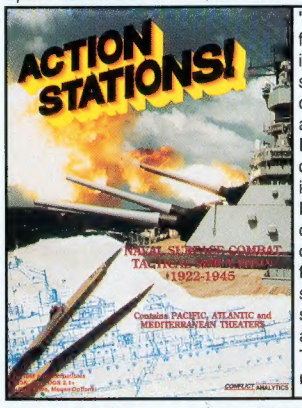

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